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AMERICAN JOURNAL OF INSANITY. FOR JULY, 1877.

AUTOMATIC CEREBRATION AS RELATED TO CEREBRAL LOCALIZATIONS.

BY J. K. BAUDUY, M. D.

Of late years the attempt to explain certain forms or varieties of intellectual phenomena, usually described as unconscious cerebration, has not been happy in its results. Certain physiologists have not hesitated to invoke the well known laws of reflex action as the most plausible method of unraveling a group of mental actions which are of a most delicate and highly intricate order, acts, indeed, purely voluntary, whose spontaneity is entirely opposed to mere automaticity; acts pointing to the existence of an intelligent and immaterial principle, acting upon matter, and utilizing the brain as a medium for the exercise of its functions. These new theorists hold that centripetal impressions, or physical sensations, emanating from the external world, hence purely eccentric in their essence, become concentrated, and by a new physiological process or adaptation, which they assume to understand, are animalized, spiritualized or quintessenced, so to speak, in the ganglia known as the optic thalami—afterwards, propelled therefrom towards certain assumed definite

* Read before the Association of Superintendents of American Institutions for the Insane, at the meeting held at St. Louis, Mo., May, 1877.

centers in the cortical portion of the brain, where they constitute the basis or material nidus of the purely psychological sphere, which is only stimulated into action by incentives coming from without. In other words, purely external impressions, or the so-called sensations, are the *starting point* of all true cerebration. Our voluntary motions, our conversations, our thoughts or ideo-motor movements, which are sources of invention, and so many causes of the various practical adaptations of modern life and social intercourse to the sciences and arts; all such movements are only so many reactions of material sensibility, mere reflex phenomena; concretions, which subjected to a peculiar molecular action of certain cortical cells, and having a common extraneous starting point, do not develop any, but purely material actions and reactions of certain definite types.

To reflect, therefore, is to deliver one's self up to the automatic action of cerebral cells, which, by mutual reactions and inter-associations, eliminate psychical force which is, therefore, originated, controlled and preserved by certain chemico-molecular, or vital disturbances of their static equilibrium. This force is thus discharged or disgorged and, like all purely material displays of functional activity, is only gauged and regulated by the physiological activities of the particular portions of the the cerebral organism to which they appertain. Under these same circumstances memory merely represents a certain primordial property of nervous element. All the processes of intellectuality are performed in a blind, unconscious, irresistible manner. Automatic activity reigns supreme, and thereby becomes the sole force which rules and orders the intellectual operations.

It is thus that new relations are produced, that our daily reminiscences are preserved; *this influence* always present, always active, manifesting and occasioning a spontaneity in our ideas, words and acts, becomes more

and more indicative of the vitality of the cerebral regions whence it springs. To believe that thought can originate spontaneously in the brain is an error, it already appertains or is incorporated in certain territories of the cortical substance which constitute the seat of its presence, and need only to be placed in automatic vibration for its external manifestation or expression. Such are the conclusions which we are to be indoctrinated with, as if contemporaneous physiology would blindly and resignedly subscribe to this manifest abdication in favor of materialism.

Where heretofore we have believed in the existence of a soul, voluntary movement, free judgment, action impressed with the divine seal of intelligence, or the energetic manifestation of personal liberty, the inspiration of genius, acts of heroism, we have all along been mistaken—alas! such were only automatic, blind reactions, unconscious even of their own fatality. No matter how marvelous such psychic functions have appeared, they were only reflex phenomena perfected in the brain, where the materials, which were received under the guise of mere impressions of physical sensibility, became elaborated and accumulated by phosphorescent reactions and vibrations, which at the proper time were awakened to be automatically ejected, or thrust externally, resuming and blending the harmonic modalities, infinitely varied, and which were heretofore falsely interpreted as expressive of the voice, so to speak, of the human soul.

Such, in a few words, is the doctrine, of reflex cerebral action or of unconscious cerebration. Some more recent workers in this field claim to have ascertained that the optic thalami are the *special laboratory* which receive and purify all the impressions of purely physical sensibility, during the early stage of their voyage in the

nervous apparatus; they assert that the basal ganglia form essentially the central regions which constitute, as it were, a system of conjunction of the entire cerebral mass. All physical impressions are arrested there, elaborated there, animalized there, subjected to a metabolic action, and rendered more assimilable before passing to the cortical layers where they finally become incorporated as an integral part of the organism.

The first impression we experience in the presence of these audacious attempts at localization, is one of utter astonishment. The mysterious organism of the brain, the most mysterious of all in the human economy, which for centuries has defied the sagacity and explorations of the most skillful investigators and serious workers, like the ancient Sphynx's enigmas has perpetually defied us, and refused to divulge the secrets of its intricate and complicated structure. What has been ascertained to-day is but too often lost to-morrow, and the labyrinth of perplexities involved in the study of this organ, still, to a great extent, prevents the successful exploration of its mysterious constitution and functions. In refutation of these assertions and presumptive conclusions, it seems to us that the anatomical proofs are, as yet, absolutely incapable of carrying conviction. The existence of connections which reunite certain portions of the thalami optici with definite regions of the cortical portions, with the peripheral apparatus of the senses, with the sensitive fibres in general, is still to a great extent contestable and doubtful. Huguenin (of Zurich,) among others, formally declares that the sensitive fibres emanating from the cord are not distributed to the cerebral ganglia, (optic thalami, corpora striata, lenticular nucleus,) but passing through a grey mass *behind* these ganglia go directly and without interruption towards the cortical regions,

taking part in the spreading out of the white substance. Even if the anatomical proof were established it would possess but a subaltern value. The physiological ground of the argument can only be sustained by a consideration of the experimental results attained in the localization of cerebral functions by Fritsch and Hitzig, Fournier, and particularly by Ferrier. Notwithstanding the confidence and great deference due these gentlemen, on account of the high order of their indisputable scientific attainments, it is nevertheless impossible to overlook the fact that the method of interstitial injections and electrization are open to numerous fallacies, as proven by Brown-Séquard who says:

Whatever may be the truth about that special point, there are several decided obstacles to admitting the conclusions which have been drawn from these experiments; one of these is that the parts, through the galvanization of which these movements are caused, are the will centers for such movements. In the first place, these supposed centers are not situated in homologous parts in different animals, cats and dogs for example, a fact which evidently is a fatal objection to the theory. In the second place, these centers do not differ in size in the same proportion with the muscular matter to which they correspond; one small muscle, for example—the orbicularis oculi—which in bulk is certainly not even the hundredth part of the mass of muscles of the anterior limb, has a center (pointed out by Fritsch and Hitzig,) which, according to my experiments, is five or six times (in the dog) as large as the center for the muscles of the anterior limb, so that the center for the orbicularis is, proportionately to the mass supposed to be moved by it, five or six hundred times as large as it should be. In the third place, according to Ferrier's researches, we find that instead of one center the orbicularis has three in dogs and cats, and that the sterno-cleido-mastoideus has from three to five centers, and that these various centers for one muscle are wide apart one from the other.

Besides, Vulpian has injected the chemically inert lycopodium powder into the cerebral circulation, with the effect of choking up the vessels of the cortex cerebri, whereby we should expect that the function of this organ would be destroyed; nevertheless, by galvanizing it, Vulpian succeeded in obtaining the muscular move-

ments so often referred to, almost as distinctly after, as before the operation.

Hitzig has found that the destruction of these supposed centers causes a paralysis of the parts which are moved when galvanism is applied to those centers. This sometimes occurs, it is true; but sometimes it does not, and when it occurs it is not permanent. In one case, one of the best observers of our times, Prof. Rouget, after producing paralysis of the anterior limb, by destruction of the cortical center of the opposite side of the brain, found that when the similar center on the other side of the brain was destroyed, there was (instead of a paralysis of the anterior limb yet free,) the cessation of the paralysis produced by the first lesion.

* * * Another important fact is, that if we take away not only the pretended psycho-motor center of a limb, but besides that part, a good deal of the surrounding substance of the same half of the brain, we frequently find that there is no paralysis appearing. If Hitzig's views were correct we should then have a more extensive paralysis than there is in his experiments, as not only several of the supposed psycho-motor centers are taken away, but also the intervening parts of the brain, which several writers have considered as being vicariously able to replace the missing centers. I know that it may be said that the other half of the brain then performs the motor function of the injured half. But what becomes of this explanation *in extremis*, when we find that the simultaneous ablation of the pretended psycho-motor centers on the two sides is not followed by paralysis? The celebrated experiment of Flourens, consisting in slicing away the two halves of the brain from their anterior parts towards the pons Varolii has long ago shown that a great deal of the substance of the cerebral lobes can be taken away without the appearance of paralysis. * * * *It is clear that if a paralysis can appear on the side of the injury to, or a disease of the brain, we are not to look upon it as an effect of a loss of function of a supposed motor center.*

Caustic liquids inserted into the depths of the cranial substance must cause injury when diffused; their destructive action is complicated with many divers accidents, particularly the reactionary inflammation excited around the limits of the focus of the injection, which fact will invalidate precise and rigorous conclusions. The same may be said of the effects of electrical stimuli,

which are probably reflected to the basal ganglia by diffusion. I moreover believe that the great majority of physiologists are in accord, in consequence of the want of sufficient constancy in the results of the experiments, in asserting that the problem has not yet been solved and that new researches are necessary to elucidate the subject.

It may not, here, be amiss to review some of the opinions of laborers in this special field of science. Nothnagel, whose recent researches upon the encephalon have attracted universal attention, holds that the only phenomenon which he ascertained to exist after the destruction of the optic thalami in animals, was an abnormal position of the extremities. Longet has taught that the disorganization of the latter ganglia in living animals is not accompanied with destruction of vision, and so thoroughly did his experiments develop this fact, that it might well be claimed, as he maintains, that the name which the ancient anatomists imposed upon these bodies, of thalami optici, might be relinquished in consequence of their non-association with visual functions, and great obscurity still attaches itself to our appreciation of their physiological interpretation. Without much embarrassment these adverse citations of authorities might be multiplied, the inevitable consequence of which would be to compel us to confess our ignorance of the subject, so far at least as the appropriate and specific workings of these ganglia are concerned.

Messrs. Render and Gombault, in a remarkable study of cerebral localizations state that:

As far as the optic thalami are concerned, a result seems established at the present time, a negative result it is true, which nevertheless, possesses a real importance. Their excitation provokes no phenomena of movement, *nor painful sensation*. Their destruction provokes neither motor paralysis nor loss of sensibility.

Now let us consider for a few moments the lessons furnished by the study of clinical medicine, as the evidence collated therefrom is more than sufficient to establish our position, Vulpian says:

That the experimental lesions of the optic thalami do not weaken sensibility which survives even after their ablation. Moreover the pathological changes in the thalami optici do not seem to have any special influence upon sensibility. I have seen a sufficiently large number of lesions (hæmorrhage and softening) of the optic thalami; I have given a very special attention to the examination of this point physiologically and pathologically, and for me there is no doubt that these lesions, when they are well limited to the optic thalami, and are not accompanied by other lesions, are not able to determine the least diminution of sensibility, and when sensibility *is* slightly weakened, it is no more so, than happens in certain lesions of the corpora striata. The lesions of the optic thalami especially cause paralysis of motion. This result is often observed in man.

I am well aware that certain contradictory results can be invoked at this juncture, notably in the experiments of Crichton Browne, as well as those of Türck and Waters, but where can any doctrine be found which has not been subjected to a parallel ordeal. Let us now consider some other facts. According to not a few of the defenders of the doctrine we are criticising, the sensitive impressions emanating from the optic thalami, will not be directed and disseminated indifferently in the cortical portions, but on the contrary, each particular order of impressions will be distributed into a special area of the periphery of the organ; in other words, each peripheral vibration discovers in the nervous centers a sympathetic vibration, so to speak, from adjoining portions in immediate opposition, or in active association and confederation with the centripetal vibration. To better establish this proposition of the arrangement of impressions in dis-

inct zones of the cortical substance, three arguments are resorted to.

First; the anatomy of the brain, whence results the existence of the direct connections between certain portions of the optic thalami and certain districts of the convolutions. In refutation of this assumption, however, I may refer to previous criticisms, namely, that the very minute anatomy of the brain is more or less *sub judice*, and the present status of the question, especially, as regards the direction of the fibers and their conjunctions and distributions, is to be more thoroughly and definitely ascertained, requiring us to receive all positive assertions in this connection *cum grano salis*. Suppose, moreover, that anatomy did reveal to us positively, and with mathematical precision, the direction that a certain impression follows in the brain, and the particular portion which furnishes a limit to its further progression in a circumscribed portion of the convolution; how can we feel assured that this identical impression may not be afforded every latitude for diffusion and dissemination, and that even before being perceived it may be widely spread in an indefinite manner in the vast expanse of the encephalic cortical? Are our methods of investigation sufficiently subtle, accurate and mathematical to definitely determine this very important matter?

The second proof, often quoted by the advocates of this theory is that experimental physiology, and especially the experiments of Flourens, prove that upon living animals successive layers of cerebral substance may be methodically removed, with the result of an accompanying loss to these animals of the faculty of appreciating visual or auditory impressions. To us, for reasons developed elsewhere, it seems that experimental physiology has not proven the proposition. Flourens, more-

over, far from accepts or endorses the doctrine of brain segmentation in affected districts, for the reception of impressions of a different character—on the contrary he held, to use his own words, that :

1. A portion quite extensive of the cerebral lobes can be removed either in front, behind, above, or at the side without their functions being abolished. A restricted portion of these lobes, *therefore*, suffices for the exercise of their functions.

2. Just in proportion to the removal, will all the functions become suspended and gradually extinguished, beyond a certain limit they will become entirely abolished. The cerebral lobes therefore co-operate in their totality for the perfect and entire exercise of their functions.

3. Finally, as soon as perception is lost, all functions are ; as soon as one faculty disappears all disappear. There is not, therefore, a different seat for the different faculties nor for the different perceptions.

Again, he says :

When a perception returns all return ; when one faculty reappears all reappear.

Farther on in making more general deductions he affirms :

1. That the cerebral lobes are the exclusive seat of the perceptions and volition.

2. All these perceptions and volition occupy the same seat in the organ ; only the faculty of perceiving, of conceiving, of wishing, constitute a faculty essentially *one*.

3. The third and last argument is the citation of the curious, interesting, but incomplete experiments of Schiff's upon the elevation of the temperature of nerves and nervous centers following sensorial irritations.

A few quotations from Schiff himself will however cause us to invalidate the broad conclusions drawn by our antagonists, Schiff says :

It follows from these experiments, that, as a general thing a sensible excitation acts upon *both* hemispheres in an almost equal manner.

Again, he says:

We believe that we are able to affirm that sensible excitations act upon *all* the parts of the cerebral hemisphere.

It is true that we do find in Schiff's work the following declaration.

From what we have demonstrated it seems that it is always the temperature of the *median* zone (of each hemisphere) which surpasses that of the other zones. It would therefore appear that sensible impressions, although reacting upon the entire brain, exercise a more marked influence upon the *middle* portion of the hemispheres, and if the internal portion is compared with the external portion, the first will be found more active at the moment of a sensible excitation of the body.

If we are to accept the conclusions of these gentlemen, we are to believe that our notions of personality and moral responsibility, properly speaking, the development of our ideas, our acts of judgment and will, all the operations of our psycho-intellectual sphere, derive their origin from the pure *sensibilities* of nervous elements. In reply to such deductions and without noticing certain views recently maintained by some distinguished modern writers, regarding the mode of production of the phenomena of intellectuality wherever grey nervous matter is found, whether in the brain or spinal cord, I will content myself with recalling the fact which seems to have been overlooked and is pregnant with importance, namely, that, with ordinary care and circumspection, one must perceive without difficulty a profound difference, one quite unmistakable between spinal and cerebral functional activity. What will we ascertain in the analytical scrutiny of reflex phenomena? After the retardation of a minute fraction of a second, motion succeeds without an appreciable interval, the action of a stimulant, the presence or existence of which is absolutely required; its evolution is inevitable,

blind and oftentimes unconscious. *Nolens volens* we ourselves aid its explosion or transition, it seizes possession of our muscles with a grip of iron—and with sovereign and indisputable force it throws them into irresistible spasms—either of the mildest or most convulsive character, oftentimes fatal in results.

Do we find these characters in the pretended reflex cerebral phenomena, with which explanation our antagonists have dignified the evolution of the phenomena of intellectuality? That we do *not*, we have only to study the workings of our own internal consciousness to be convinced. Without any external stimulation, amidst the most profound silence from without, in the recollection of our respective senses, we are able to evoke with ease, or even capriciously, certain reminiscences connected with the far distant past, and immediately the *vestigia rerum* will make their appearance vivaciously, and yet saliently, before our attentive view. They are engulfed in the living tombs of our memories.

The faithful guardian we called the soul has preserved in its sanctuary the impression of past events, notwithstanding the destruction of nervous cells and accompanying retrograde metamorphoses of nervous matter. Thus, in a moment, are recalled into life, souvenirs of our early childhood, sentiments which were nearly buried in the obscurity and silence of by-gone years. With ease are refreshed our scientific labors and acquisitions which have been dormant, and have almost escaped our conscious interpretations. Yet we are desired to believe that such phenomena are but simple reflex operations, similar to those emanating from the ganglionic cells of the spinal marrow.

We may voluntarily continue to contemplate recalled associations, even when these are of the most immaterial nature as e. g., cause and effect; distinguish

even persons, things and places upon which we are wont to dwell and reflect ; we may concentrate our minds with sympathy upon certain recollections, or, on the other hand, we may repel them with horror ; or, as when certain remembrances naturally reproduce others which are analogous, associated or contemporaneous, we can immediately and decisively repress them, when we so desire, thus continuing uninterruptedly to follow and enjoy our more pleasurable recollections entirely at our discretion. In one word, our mind moves with a deliberation and liberty which rejects inevitably such aspersions of blind fatality as explanatory of its mode of action, and thereby precludes our contenting ourselves with a doctrine which is as repugnant to our feelings as it is insulting to our intelligence. Let us reflect, to develop this matter a little more *in extenso*, upon the analysis of a deliberate, premeditated and voluntary determination, which we are at perfect liberty either to execute or not as we judge best.

Having carefully weighed the motives and being in possession of the enjoyment of the most absolute freedom of action, as regards our decisions ; having foreseen the consequences ; having overcome all the impulses and incentives which incline us towards a certain line of action ; yet, resisting our instincts, the force of habit perhaps, the influences of flesh and blood, we succeed in mastering ourselves by the exercise of firmness, and our personal will power. If in opposition to such a course we permit ourselves to glide along and yield to some unfortunate and reprehensible inclination, is there nothing but reflex transmissions of sensiferous impressions to explain the culmination and perfect elaboration of such high states of psychical development ? Do such deliberate determinations admit of such an interpretation ?

It is precisely in this manner, and dependent upon the issue of such internal conflicts and after the experience which such painful and prolonged struggles in the innermost depths of our consciousness afford, that the moral responsibility of our acts commences. In other words it is in this manner that either crime or virtue, merit or disgrace, derive their birth. Imagine for example a rock precipitated violently to the earth in blind obedience to the great law of gravitation, exercising discretion and liberty in order to arrest its flight. Shall we refer to the pure and brilliant conceptions which are eliminated from the intellectual domain, and which attaining their culmination represent that celestial ray, that superior illumination which we term genius? Are the heroic inspirations of Homer and Virgil, the admirable calculations of Newton, the splendid speculations of Descarte and of Leibnitz, the funeral orations of Bossuet, the immortal tragedies of Shakspeare and Racine, the *chefs d'œuvres* of Michael Angelo, of Raphael and of Rubens, the musical creations of Beethoven and of Myerbeer, the science of an Alexander Von Humboldt, the genius of Cæsar and Napoleon, the researches and sparkling scintillations of Harvey, Virchow, Trousseau, Ray, Esquirol and all the illustrious disciples of the great healing art; in a word, are all the literary, artistic, scientific, philosophical, medical, poetic, legal, rhetorical and theological treasures of the world, are we to *believe* that they all are only the mere reflex products of nervous action? Are such delicate and incalculably superior psychic developments and attainments purely and essentially reflex actions, strictly analagous to automatic actions of the spinal marrow?

Such assertions, therefore, are pure fictions which savor of puerility, pure hypotheses without adequate

proof; mere comparisons without even the foundation of arguments, mere figments of the fancy without authoritative corroboration, mere shadows which dissolve when a serious attempt is made to reach them, hiding behind their dark outlines the spectres of materialism and fatalism. Molecular vibrations could not evoke even simple perceptions, if behind their action a *principal* did not reside which receives, vivifies and distributes them, the same principal which sends forth, over the entire organism, life and movement, *mens agitans molem*. We fully admit that there are vibrations of matter which may permeate directly, influencing the innermost recesses of the soul; there are modifications so intimately associated, and so evanescent in character, that they may evade the scrutiny of the most careful observer and yet direct our inclinations and modify our actions with an almost overpowering force, and result in those irresistible yieldings those impulsive and impetuous monomaniacs which have so long attracted the attention of medical alienists and moralists. When the cerebral circulation is momentarily disturbed, when an epileptic wave passes over the nervous system, immediately the intellectual faculties are obscured, the moral sense blunted, and the most honorable, learned, prudent, reserved and discreet man commits acts which make us shudder with horror, notwithstanding that, at the same time, they disarm public opinion and retributive justice. Especially the presence of epilepsy produces psychic destruction, which is not unlike the ravages wrought by the fury of the tempest, the most dreadful confusion signals its presence, with at the same time an accompanying and absolute moral irresponsibility. Such exceptions, however, do not invalidate the rule, which attaches to man in his normal condition, the responsibility of his acts because he has received from his maker

the precious gift of liberty, which alone makes him capable of merit.

The repetition of a muscular act, which before the muscular sense was fully educated for a complex movement, was entirely under the control of the will, and thereby regulated in all its details, may finally become repeated automatically, it is true, and even in an almost absolutely unconscious manner. I am free even to admit of a sort of automaticity of cerebation and unconscious ideation, because during such states the annular protuberance and basal ganglia predominate in their action over the cortical layers, and many of the examples of Laycock and Carpenter are corroborative of the latter explanation only, depending as they do, not upon the cortical layers properly speaking, but upon the mesocephalon or spinal cord.

Ferrier himself, whilst stating that:

In man the shorter circle through the optic thalami and corpora striata does not appear sufficient for the interruption of the conscious circle through the hemispheres, by lesion of the cortical motor centers, produces paralysis of a very complete and enduring character. This goes far to show that even the most habitual or most automatic actions of man require the co-operation of the centers of conscious activity, a view which is taken and strongly argued by Dr. Ireland.*

But (Ferrier continues) though the basal ganglia may not of themselves suffice for the execution of the habitual movements in man, there is every reason for believing that they do so to a large extent, from the fact that the performance of habitual actions exercises but little interference with the conscious activity of the hemispheres in other directions. We may express it thus, that in actions requiring conscious discrimination and voluntary effort, the larger circle of the hemispheres is involved, but that in the actions which have become habitual or automatic, the larger circle is greatly relieved by the organic nexus between impression and action, which has been established in the sensory and motor

* Can Unconscious Cerebation be Proved. *Journal of Mental Science*, October, 1875.

basal ganglia. The optic thalami and corpora striata form thus a sensori motor mechanism, according to the views of Dr. Carpenter. I would use the term, however, only in the given sense of afferent—effluent; it having been shown that sensation or consciousness of impressions, is not a function of the optic thalami. Hence the reaction between the optic thalami and the corpora striata being below the domain of consciousness, is outside the sphere of psychical activity, properly so-called.

In conclusion, therefore, it is wholly impossible for us to grant such an unheard of extension to an exceptional and subordinate factor, which we term unconsciousness; and we will continue to protest against the invasion of phosphorescence and automaticity, when placed upon the same level as intellectual and moral action.

Now, more than ever before, we feel assured that the immortal soul, the Divine spark animating the human organism, has not, as yet, been dethroned.*

*For many of the inspirations of this paper we are indebted to Dr. Masoin's learned analysis of the subject in the *Revue des Questions Scientifiques*.

THE STRUCTURE OF THE VESSELS OF THE NERVOUS CENTERS IN HEALTH, AND THEIR CHANGES IN DISEASE.

BY THEODORE DEECKE,

Special Pathologist, New York State Lunatic Asylum, Utica.

Herbert C. Major in his observations on the histology of the morbid brain, remarks regarding the vessels of the brain.*

“Under this head my observations need be only very brief, for the state of the vessels in almost all forms of cerebral disease has always attracted much attention, and as they admit of easier study than most of the other elements, accurate descriptions are not wanting.”

This statement indeed can be only partly indorsed. It is true the special literature upon the subject in question abounds in most valuable observations, but the study of the minute, normal and abnormal structure of the vascular system of the nervous centers, seems to offer no less difficulties than that of its other elements in general, as the descriptions given, up to the present time, are imperfect and incorrect.

Since the year 1874, when the above quoted sentence was written, only a few points of any importance have been added to our knowledge. The existence of lymphatic ducts around the cerebral vessels, the perivascular canals of Virchow and Robin, has been more generally recognized. The most successful investigator of the subject B. Riedel,† has discovered anastomoses between

* West Riding Lunatic Asylum, medical reports, vol. 4, p. 235.

† B. Riedel, Die perivasculären Lymphräume im Central Nerven System, etc., Archiv. Bd. XI page 272 ff.

these ducts, and regards the adventitia of the vessels of the nervous centers as the enveloping membrane of an independent lymphatic system, and as such, it is claimed to be lined by a separate layer of endothelium. Even the existence of the much discussed perivascular spaces of His has found its renowned advocate in R. Arndt,* who points out the genetic difference, and disconnection between the vascular system and the tissue of the brain itself. He denies any similarity of the peculiar prolongations, the cells of Roth, Golgi, Boll and others, adherent to the adventitious membrane of the arteries, with the so-called Deiter's cells of the neuroglia. The most recent article on normal and pathological anatomy of the cerebral vessels has been written by Obersteiner,† and as this publication exhibits the present state of knowledge on the subject, I will proceed to discuss in the following, especially the views laid down by its experienced author.

In regard to the method of investigation and the preparation of the objects employed, I give the following brief account in advance.

The insulation of the vessels from the brain tissue, and the transparency of the objects, permit of an examination, even with high, well penetrating and defining powers. Thus many interesting points of the normal and abnormal structure can be, and have been disclosed. But a true conception of the minutest structure, even of these comparatively large objects, can only be arrived at by the analysis of a number of series of the finest transverse sections, perfectly rectangular to the course of the vessel. These can be made with success, only by the aid

* R. Arndt, Ueber den Etat criblée Virchow Archiv. 1875, Bd. 63.

† Obersteiner, Beiträge zur pathologischen Anatomie der Gehirngefäße. Stricker, medicinische Jahrbücher, 1877, Heft. 2.

of a microtome which I always use. The insulated vessels hardened in bichromate of potash are embedded in a cast of parafine and oil; some of the sections are colored in carminate of ammoniac, others are not; they are then washed in alcohol and cleared up in oil of cloves, gently heated to about 115° Fahr., in order to dissolve, from the specimen, all adherent particles of the parafine cast, and mounted in Canada balsam. After the application of the oil of cloves they are ready for examination, and even the finest structure of the endothelium will be easily seen, without any previous treatment either by nitrate of silver solution, or by any other agent.

THE ARTERIES.

Obersteiner, in concord with other observers, distinguishes in the arteries of the brain, except in the arterioles, four different layers of tissue, viz., the endothelium, the membrana fenestrata, the tunica muscularis and the lymphatic sheath.

The endothelium represents a very delicate membranous layer in which, after treatment with nitrate of silver, the single cells composing the membrane, are distinctly brought to view; the nuclei are oval or hone shaped, their longitudinal axis being placed in the axis of the vessels. When the membrane has been insulated, the nuclei seem to be attached to spindle shaped cells, with long processes; which appearance, however, according to the author, is only due to foldings of the very delicate membrane itself. The endothelium is attached to a firm, compact, elastic layer of tissue, the membrana fenestrata, which exhibits a marked tendency to forming longitudinal folds. It contains no nuclei and shows no cellular structure, but is covered with numerous shining points, holes or perforations. It is much

diminished in the smaller arteries and disappears entirely in the arterioles.

Intimately connected with the membrana fenestrata are the circular muscular fibres, which form the third layer, the tunica muscularis. In its outer layers this membrane appears remarkably crenulated from projecting muscular fibres. While the larger arteries contain several layers of the fibres, the smaller vessels exhibit but one, and in this, the single fibres are shorter and broader. But loosely connected with the tunica muscularis and forming an entirely independent sheath, is the fourth membrane, the adventitia, or the adventitious lymphatic sheath. It can be easily removed, and contains round and oval nuclei. Frequently the sheath, when wide enough, appears to be arranged in wave-like parallel folds, which resemble bundles of connective tissue fibres, so that it seems as if a layer of connective tissue fibres had been inserted between the tunica muscularis and the adventitious sheath.

So far, we have stated the views of Obersteiner regarding the structure of the cerebral arteries. It is not long since, through the discovery of the cellular structure of the capillaries and the endothelium by Ebert, the fourth layer has been added to the three membranes, supposed to compose the wall of the arteries, the intima, the media, and the adventitia of former times. At present, on the ground of my own observations, I must claim for the larger arteries, the existence of at least six, probably seven different layers.

All the main arteries of the spinal cord and the brain, and their branches, exhibit in general, the same structure. The endothelium, in the larger vessels, consists of a double layer of epithelial elements. The innermost layer is formed by peculiar cylinder epithelium cells, with round nuclei. They are in health, of a

very fine and delicate structure, slightly oval shaped, generally slightly convex in their direction towards the lumen of the vessel, and flattened at the base. They are not ciliated, but frequently appear, instead of convex, excavated, resembling the so-called goblet cells. The second layer of the endothelium, to which the former is attached, is formed by long and narrow pavement epithelia with oblong nuclei; but in these much variety exists, so that they often, indeed, may resemble spindle shaped cells, as Obersteiner also seems to have observed. In the smaller branches of the arteries, which have entered the brain substance, and always after their first division, this pavement endothelium forms the only inner lining of the vessel.

The next layer, the *membrana fenestrata* is built up by an irregular, reticulated network, as shown in transverse as well as in longitudinal sections, presenting a web of broad, compact bands, with numerous foramina between them, differing in size and shape. The bands contain no nuclei, and show no cellular structure. This layer, characteristic of the arteries, varies much in dimension in the same specimen, and in the contracted vessel it generally appears denticulated. At its outer surface it is bordered by a uniform, tendon-like membrane, of quite a different nature, which resembles, in transverse section, a solid ring. It does not imbibe the carmine, and is of a shining appearance, and elastic, though no elastic fibres can be detected. It is connected only at intervals, and but loosely, with the fenestrated membrane. As it is only found in the arteries it must undoubtedly, by its peculiar formation, be regarded as a separate and the fourth layer of the same.

The fifth membrane is represented by the *tunica muscularis*, consisting of transverse unstriated muscular fibres, laid one over the other, interwoven with elastic

fibres, and in whose interstices, flattened lenticular corpuscles are embedded. The muscularis, in transverse sections, forms the most extended of all the layers of the vessels. It is but loosely connected with the fourth layer, but intimately passes over into the sixth layer, formed by separate large bundles of elastic fibres. This layer has also been overlooked by Obersteiner, who has confounded it with the supposed foldings of the adventitia, the author's lymphatic sheath.

The tunica adventitia, the now seventh membrane of the arteries, has recently been more subjected to discussion than any of the others. My own observations, however, do not sustain the correctness of the view, now generally received, regarding its nature as the enveloping membrane of an independent lymphatic system. This view would involve, as pointed out by Recklinghausen, the endothelium nature of the cells composing the sheath, which, as regards the adventitia of the arteries is entirely wrong. The membrane is built up of broad, fibrous, connective tissue elements, spindle shaped cells with long prolongations, and large, slightly oblong nuclei in the outer, and smaller round nuclei in the inner layers of the same. It is furthermore not true that the adventitia in health contains free cell formations of a lymphatic nature. This is very clear in transverse sections, especially when compared with the adventitious tunic of the veins and its contents, both of which are of a very different nature. In longitudinal sections, or when examined as a whole, may not the abundance of the large transparent nuclei and deposits of various kinds, even in health, have erroneously been taken for lymphatic elements? But even if in the adventitia of the arteries occasionally, free corpuscles, similar to those of the lymphatic fluids should occur—and nobody, I think, can furnish the proof that each artery of the brain is provided with an adventitious

sheath containing such bodies—could not these just as well be extravasated colorless blood corpuscles? Upon the ground of all that has hitherto been published on the subject, and from all the illustrations given in drawings, I must deny that any true evidence of the existence of an independent lymphatic sheath around the arteries of the spinal cord and the brain has ever been given. In diseased conditions of the vessels the adventitia may appear much distended, dilated and altogether altered; it may loosely envelop the contracted or stenosed vessel, but even here transverse sections through the whole organ will leave no doubt as to its true nature and structure. When Obersteiner says that he has observed an artery with one, and even two veins, inclosed in a common lymphatic sheath, he may be correct, as this might occur when the vessels are situated close together, a *lusus naturæ*, the possibility of which can certainly not be denied, but regarding the main question it proves nothing.

THE VEINS AND THE CAPILLARIES.

In the veins of the brain Obersteiner distinguishes three layers, and in the capillaries two. The epithelium or endothelium of the veins is similar to that of the arteries, but the nuclei are not so regularly situated, and more spherical; the cells of the arteries also are longer and narrower. This endothelium is intimately connected with the second layer, which, according to the size of the vessel, consist of a more or less extended connective tissue layer, with numerous irregularly situated round nuclei; single unstriped muscular fibres also occur, especially in the larger veins. The lymphatic sheath has the same appearance as that of the arteries.

The capillaries finally consist of the delicate endothelium membrane, loosely enveloped in the lymphatic

sheath. This, however, has acquired a greater firmness than in the arteries and in the veins. The lymphatic sheaths, therefore, surround the whole vascular system of the brain, like a uniform and wide envelop, which is nowhere in connection with the subjacent layers. Between both layers there is a free space, the adventitious lymphatic space, or the lymphatic canal of Virchow and Robin.

The lymphatic sheath is not intimately connected with the adjacent brain tissue. Between them, in the normal state, considerable spaces are left, which likewise belong to the lymphatic system; these are the lymph ducts of His. They are not lined by a separate wall; the latter is formed by the tissue of the brain itself, and they empty into all the ultimate and minute fissures of the tissue, by which they are likewise brought in connection with the pericellular spaces.

The endothelium of the veins of the nervous centers, according to my own observations, consists, similarly to that of the arteries of the two layers of cells, differing in nature, viz: cylinder cells and pavement epithelia. Their arrangement and the cells themselves are microscopically exactly the same as in the arteries. The third layer, greatly variable in dimensions, is built up of elastic fibres, and the fourth again of long and broad pavement epithelium, with comparatively small nuclei.

This is a double membrane, not closely connected with the subjacent layer. It contains invariably a large amount of lymph-corpuscles, and can but be considered as a true lymphatic duct. In transverse sections this adventitious layer is so markedly different from the corresponding adventitia of the arteries that I hardly understand how this could be overlooked. The sheath extends, however, more delicate in its structure, over the larger capillaries, while the smallest branches of these are not provided with any envelop. These latter

are directly embedded in the nervous tissue itself, and of such small dimensions that they allow only the passage of single blood corpuscles, which attain, compressed by the walls of these ducts, an oblong form. It seems, therefore, justifiable to me to distinguish between two kinds of capillaries, the one belonging mainly to the venous system, the others to the arterial system, a conjecture which, perhaps, is of practical importance for the understanding of some physiological relations connected with the nutrition of an organ, in which the change of matter must reach its highest point of action. It can not longer be doubted, since we are in the possession of the brilliant experiments and analyses of Pflüger on this question, that the consumption of oxygen takes place only in the tissues by the cells themselves, to which the red corpuscles of the arterial blood, charged with oxygen, transmit this agent of all life and life action. In the insects where the circulatory apparatus is most imperfectly developed, where no capillary system exists, we know that the finest ramifications of the air passages empty into the organs of the body themselves, so that the air is brought into direct contact with the cells. In the higher developed animals it is the hæmo-globin of the red blood corpuscles to which this duty is allotted, and it would, therefore, be very difficult to explain how this could be performed when the finest ducts in which these corpuscles circulate were separated from the tissue by an enveloping sheath containing lymphatic fluid. There are still a number of other physiological, as well as pathological conditions, which permit of an easier explanation by a conjecture based upon an anatomical fact, but in an article of this character I must forego the pleasure of entering upon a further discussion of the subject.

(To be continued.)

MECHANICAL PROTECTION FOR THE VIOLENT INSANE.*

Challenge of Dr. J. C. Bucknill.—What is Mechanical Restraint?—Philosophy of Restraint.—Why Mechanical is preferable to Manual Control.—Mild Treatment long the Practice in America.—Movement for Exclusive Manual Restraint in England.—Evils of Laxity of Control.—Illustrative Cases.—Differences of Opinion among the English.—The Status of Restraint in the United States.—Experience of Dr. Walker in England.—Some Questions for Dr. Bucknill.—Adherence to our Convictions, the Path of Duty.

EUGENE GRISSOM, M. D., LL. D.

Superintendent of the Insane Asylum of North Carolina.

In a recent publication entitled “Notes on Asylums for the Insane in America,” by the distinguished John Charles Bucknill, M. D., F. R. S., appears the following declaration :†

“The pages of *The Lancet* are not likely to influence the politicians of New York, who think their insane sufficiently well cared for in the asylums I have described; neither will they have much weight with the gentlemen at Philadelphia, who are in the habit of placing three violent lunatics to sleep (?) in the same cell, prudently enough protecting them in some degree by strait-waistcoats. But it is to be hoped that a fair and frank challenge to the medical superintendents of the State asylums and the hospitals for the insane will be accepted in the friendly spirit in which it is given, and that they will not refuse to show reasons why they adhere to a mode of treatment which, in this country, is condemned by the almost unanimous voice of the profession and of the public.”

* Read before the Association of Superintendents of American Institutions for the Insane, at the meeting held at St. Louis, Mo., May, 1877.

† Reprinted in JOURNAL OF INSANITY, October, 1876, p. 147.

We have here a distinct challenge, declared by its distinguished author to be "fair and frank," as to the propriety of certain means of treatment employed by the American superintendents in the care of the insane.

It is no unknown personage who has thus arraigned this Association before the bar of medical opinion of all Christendom. It is the learned author and experienced superintendent of the insane who says:*

"I have been able to come to no other conclusion than that the great stumbling block of the American superintendents is their most unfortunate and unhappy resistance to the abolition of mechanical restraint."

It is the celebrated Commissioner in Lunacy of Great Britain who declares,†

"Unless I am much mistaken the superintendents of asylums in America have a heavy task before them, which will indeed require a determined effort before they can say that they possess the confidence of the public in the same degree to which, of late years, it has been extended in England, to the management of our county asylums and hospitals for the insane."

It is the first honorary member of the American Association of Medical Superintendents of Asylums for the Insane, and late their honored guest, who publishes to the world such statements, and challenges their denial:

"They are men, as I most willingly testify, animated by the highest motives of humanity, but ignorant and mistaken in their application of means to the furtherance of that great end to which we all press forward, namely, to the care and cure of the insane, with the least amount of suffering."

If any apology is needed for an affirmation of our position on this subject, it may be found in the claims

* *Op. Cit.*, p. 149.

† p. 148.

of the gentleman from whom I have quoted, as we learn by recent letters, that his trenchant appeals have produced a profound effect upon American alienists. His hopes and predictions are that, "they (we) will sink five fathoms deep their (our) bonds of hemp and iron." We are informed by him that an eminent physician* expresses regret that Dr. Bucknill did not make a complete tour of American asylums, in order to inform those superintendents thus "ignorant and mistaken." Expression of satisfaction also appear that certain alienists are changing their practice, are learning these new methods, and so will "be able to reinstate themselves in the front ranks of practical philanthropy."

If these things are true, if indeed this Association is ignorant, mistaken, prejudiced, every consideration for suffering humanity demands that we recognize our faults, and with a courageous hand tear down any traditional bars or obstacles that stand in the way of our duty, toward those whom God and the laws of our country have placed in our hands. But should we find these charges of incompetency in office, and the dissatisfaction of the people consequent thereupon to be untrue, courtesy should not perhaps bar the way to a "fair and frank" reply. If these charges were made by an anonymous writer, we should not scruple to say that they were presumptuous, unscientific, tinctured with self-conceit, and if the gravity of the topic did not prevent, not far from absurd.

It is to be regretted, in one point of view, that the term *restraint* was ever applied to the various means employed for the protection, safety and welfare of the insane, and others immediately about them. The insane man, with feelings or inclinations disordered by disease; with excess of irritability; with loss of will-power ade-

* Dr. Jarvis.

quately to control his appetite, tossed hither and thither by his emotions and passions, the offspring of a diseased brain; sometimes without memory, always without intelligent judgment; perhaps rent and torn by epileptic shocks, or driven to suicide or homicide, needs above all things, protection from himself. He needs at the hands of his fellow man, rest and comfort, aid and protection against his changed self.

A proposition so self-evident need not detain us. It is undisputed. Such a thing as absolute non-restraint of the insane is utterly unknown, except perhaps among the Malays, where mutual slaughter finally effects restraint. We will not do the injustice to the advocates of what, by an absurd misnomer, has been termed "non-restraint" to confound their position, even with the extreme views of Fife and Kinross, with their unlocked doors, and benevolent patients who sustain the institution, from a sense of duty, except indeed when they prefer to retire to the padded room for meditation, or occasionally break a neck in illustrating the beauty and propriety of unguarded windows, or sit with locked arms between two attendants.

Not even Dr. Bucknill, perhaps, will accept the chimera of the worthy Dr. Batty Tuke, and we shall waste no time in discussing manifest impossibilities.

The truth is, that the normal and the abnormal are present, together, in the insane. We have before us good and evil, bound up in the same body—whatever restrains the evil, protects the good. Why not mechanical protection of the insane, rather than mechanical restraint? A word is sometimes a power, to the modern mind, even reaching to the greatest individualism of character and government. Restraint savors of tyranny, and carries with it the implication of a sacrifice of the better liberty, to the meaner arbitrary rule.

The practice of alienists, in America has been put in a false position. What was known as "restraint" in former ages, was in the main really punishment. The insane were made to suffer as for crime, and were not treated as if diseased. This is the very pivotal point of the discussion. We deny that restraint, as known to asylums in America, is used as punishment, in any sense. With equal propriety, when Dr. Sayre wraps a victim of Pott's disease in a plaster jacket, or fits a leg in complicated, but ingenious apparatus, to prevent injury by motion or while in sleep, to cure deformity, may he be accused of cruel and inhuman restraint. The patient under a capital surgical operation is held, to prevent him from injuring himself amid uncontrollable pain, and sometimes he is bound to the operating table. Yet does not the very hand of humanity hold him most securely? Necessary restraint is as truly a blessing to him who would otherwise dash out his brains, as the crutch is to the shrunken limb, or the cane to the wearied frame. If, as we have seen, the sane must necessarily control, or if you please, restrain the insane, as the very erection of hospitals provides for, the true question for the medical mind is, how shall it be best accomplished, when required? We have to choose between the hypnotic power of drugs, affording the "chemical restraint of the brain cell," or the manual restraint of the strong arms of attendants, or that of solitary imprisonment in seclusion, as advocated and employed by our English brethren, or the mechanical restraint of a strap, restraining the patient to a chair, a camisole, or a muff, or the covered bed. There are patients who maltreat others; who would cut, or bruise, or otherwise injure themselves; who would tear off their clothing; who would wear themselves to death by maniacal exhaustion, with ceaseless muscular struggles; who would

devour abominations; outrage the decencies and sensibilities remaining to their fellow patients; make day and night a perpetual torment to themselves and all within their reach, retarding their own and the cure of others, and hopelessly prolonging their sufferings. Which of the above means of restraint shall we employ.

The true answer we conceive is, any and all means that we may find by experience, to be most serviceable, should be adopted.

There may be cases in which the administration of drugs would be followed by harmful consequences, or the effect would be too transient to serve the required purpose. There may be cases in which seclusion would be productive of evil and ruinous habits, or excite the most fearful terror. We are driven, then, to choose between mechanical and manual restraint. And here is the question that is really at issue between the American practice, and that of some of our English brethren.

Shall we confine ourselves, in case of necessity, to one of these means of protection for the lunatic, or avail ourselves of both, as circumstances may dictate?

It is as though in another sphere of medical art it were asked, must iron be thrown away, because we have quinine, or shall the tourniquet be forgotten, because Esmarch's bandage may be obtained? Pray what moral disability accompanies the use of mechanical restraint, to make it so black in the eyes of our British brethren, which is not to be found in the use of manual restraint? When they say, we deal with patients who need *no* restraints, we reply that manual holding is quite as much restraint as mechanical.

Many reasons may be suggested which exhibit the advantages of linen or leather muffs or bands, or leather wristlets, or the covered bed, over the threatening glances, or the hard grasp of four or five attendants,

holding the patient through the struggle of hours, perhaps prolonged to days. Mechanical restraint is far better, we believe, in many cases:

1. *Because* of the absence of the personal antagonism between the attendant and the patient, sure to arouse evil passions stirring to excitement, and followed by proportionate depression.

2. *Because* of the certainty and uniformity of its action, unaffected by momentary strength or weakness, by sudden access of feeling, or the impatient weariness of fatigue.

3. *Because* it does not excite the passions of the patient, by the mere sight of disturbance in the overwrought and worn-out attendant.

4. *Because* when recognized as irresistible, it may be said to establish an environment which the patient accepts, as there is no hope of suddenly overcoming it.

5. *Because* it is far better, for female patients, especially the epileptic and hysterical, than the sight of long continued struggles with attendants. On the other hand, if manual restraint is only used out of sight, then seclusion is added, with its evils.

6. *Because* it is better than the physical exhaustion of the patient, from contest with attendants, which may be long continued and serious, even fatal not infrequently, when the irritability of the patient is great, while his vitality is really low.

7. *Because* it may be applied uniformly at night when necessary, to the suicidal, who could not other-

wise be safely cared for, unless at enormous expense, and with the disadvantage of the attendants keeping the patient awake by their presence.

8. *Because*, in a mild form, it may be applied to the homicidal during the day, and still allow him out-door air and exercise, with safety.

9. *Because* it may save the cases of violent acute mania of whose prognosis we are most hopeful, if no traumatic trouble happens to break down the general vigor of the system.

Really when one considers the history of the provision for the insane, during the past hundred years, both in Europe and in our own country, and reflects that our opponents claim is only this, that they from being the representatives of every form of mechanical restraint, have only substituted that of human hands and retained seclusion, there would seem but little to discuss. One feels like saying with Isaac of old, "The voice is the voice of Jacob, but the hands are the hands of Esau."

All badinage aside, is it not a sorry sight to behold a philosopher who has discovered that "the great stumbling-block of the American Superintendents is their most unfortunate and unhappy resistance to the abolition of mechanical restraint" as a consequence of which they, (we) have not the confidence of the public.

Let us examine briefly the history of this subject. No superintendent of an asylum will do his duty, who is content with anything less than the most humane, the most liberal, the most enlightened, the most noble and elevated treatment of the poor sufferers whom he has in charge. The true physician of the insane acknowledges with a famous Englishman, that

A man is what he knows; of created beings the most excellent are those who steadily employ their gift of reason for the glory of the Creator, and the relief of man's estate.

If we are wrong, let us throw our idols to the moles and bats, but if it be not so, why these half apologies in some of the annual reports of our asylums; these references to the performance of our duty in one mode of medical treatment, with bated breath, and hopes for its speedy extinction, as a duty? There is no running away from this question, nor need we seem to avoid it. History confirms the justice of our course—experience affirms its propriety. It is time to say to that sort of sentimentalism which would kill a patient to save a theory, that it shall go no farther. We take the responsibility to do what is right, let it please the popular ear or not.

It is not needful that I should say to you that Americans did not wait to learn humanity from Conolly and his noble compeers. You have had a happy description of the treatment, wise and humane, at the McLean Asylum, before a new day dawned upon such institutions in England, as the unhappy Lincoln Asylum, with the cruel restraint of the patients and riotous life of the keepers.

The records, and the annual reports of our best institutions show, from 1820 to the present time, there has been a general voice of the profession in favor of the most humane and tender treatment, and yet keeping firm control of all the means that might prove advantageous. Length of years has only justified the calm conservatism of the alienists of the Union. And to the present day, the careful and limited use of mechanical means of protection for the violent insane, is a part of the treatment of nearly all American asylums.

The need of mechanical restraint, its due *use*, as distinguished from *abuse*, and the various cases in which

it proves a valuable, if not essential adjunct, to the best treatment, have been exhaustively discussed and explained, and notably so in the interesting report of remarks upon the paper of Dr. Ranney, submitted at the Nashville meeting.

It is unnecessary to quote the repeated expressions of my brethren around me, on record in the JOURNAL, or to recur to the long line of authorities, fortified by the experience of a lifetime among the insane.

But in Great Britain, usage has recently been different. Refusing to distinguish between mechanical restraint for punishment, and that which was used for protection, many of the profession accepted the dogmas of philanthropic *doctrinaires*, and among them, that the insane man must not be restrained. It was noble and praiseworthy in its theory, but impracticable, and necessarily became a pretense, secretly supported by seclusion rooms, until by degrees, seclusion was openly advocated to take the place of mechanical restraint.

There were some physicians, even in the midst of the philanthropic whirlwind, who thought it better to risk a little chafing of the skin in a camisole, than to break a half dozen ribs by the knee of an attendant, and who looked with thoughtful gaze upon the long and lamentable list of casualties in the asylum reports.

Now and then, through a series of years may be heard the cry of an anxious heart, oppressed by a public opinion built upon ignorance of the needs of disease, and led by the arrogance of self-satisfied Commissioners who required of physicians, that they should make bricks without straw.

From many reports that might be cited, I quote Dr. J. Grieve in the 19th Annual Report of the Crichton Royal Institution, for 1858.*

*19th An. Rept. Crichton Royal Inst. 1858, p. 12 Dr. J. Grieve.

Mechanical restraint has been employed in only one instance during the year—in the case of a female with epileptic mania. The patient had just been admitted, and was suffering from an attack of that blind reckless fury, not uncommonly associated with epilepsy. On visiting the patient, she was found placed in a padded arm-chair, and held there by the united force of three attendants, the reason assigned being that she had severely bitten her arm. As the wound was deep and extensive, and every indication was given that the act would be repeated, the application of the ordinary muff was decided upon.

The wound in the arm was followed by violent asthenic inflammation, terminating in extensive destruction of tissue, the establishment of sinuses &c.—had many instead of one of these wounds been inflicted, we have no doubt life would have been seriously compromised if not forfeited.”

He then describes at length the padded bed, covered with a giuth netting which is used for an intermittent suicidal and homicidal patient.

Those who take special views, “says he,” (Dr. Grieve,) will object to the so-called degradation of the patient, and insist upon more attendants. The slightest interference is the signal for a furious attack. Contemplating the struggles that might ensue, even in a single night, we can not but prefer the compulsory quiet to the licensed excitement. We are not sure, however, that these and like appliances may not be pleaded for, on higher grounds. A case illustrative comes to mind.*

Some three years ago, a patient usually quiet and industrious, had paroxysmal attacks with suicidal impulse. After long pleading from her for the “strait jacket,” which had been used at home, it was conceded. She was thus effectually prevented from inflicting the injuries upon herself, which she was impelled, yet dreaded to do. Self-confidence and a sense of safety were thus secured, which could not be obtained from the presence of any number of attendants. The happy results were again and again witnessed, and they left no doubt of their origin. Is it to be wondered at? If it be true that the sight of a bridge or a river will raise within the breast of the suicide the dormant impulse; and if it be a consequent duty on the part of the physician, to conceal, if possible, these objects from his view, surely the same law demands, and the

*Crichton.

same duty urges the removal of, it may be, more common, yet not less powerful incentives, providing it can be done without inflicting a greater injury. Is there not reason for asking the question, whether, under the dread of "mechanical restraints," we have not been frightened from the legitimate use of mechanical appliances; whether we are not losing sight of important principles, under the talismanic influence of mere phrases.

Witness the following from the Thirty-seventh Report of the Royal Asylum at Perth, for 1864: *

Notwithstanding every care taken to prevent their occurrence, many unforeseen assaults have been committed during the year—not unfrequently, on the attendants placed in special charge of dangerous patients. We may add, by the way, that such accidents would scarcely have occurred under the old regime of manual restraint, which, with all its faults, had its advantages, and which undoubtedly saved, in more than one form, many lives that are now sacrificed to the popular creed, "non-restraint," absurdly so-called. The fact can not be doubted that reaction against the errors and absurdities of the "absolute non-restraint" system is setting in strongly. Asylum physicians find that mechanical restraint is the most humane mode of treating certain exceptional phases of insanity—the only mode, apparently, of avoiding certain catastrophes, now of common occurrence; and they are gradually readopting the mildest forms thereof compatible with the safety or security of their patients. But with the present strong public feeling in favor of unqualified non-restraint—the total abolition or absence of restraint in or under all its forms or names—a feeling which is not founded on experience, but is merely the fruit of the pseudo-philanthropic tendencies of the age—it is exceptional to find men with the moral courage necessary to the confession that their experience, if not belief, is antagonistic to the favored creed or delusion of the time.

Dr. Lindsay † also mentions the case of a patient transferred to his care, who had been under the hands of more than ten unskilled attendants, while in a state of acute mania. The numerous bruises showed, said he, the nature of the home treatment; the probability being, that had the camisole been applied, the injuries would not have been inflicted. The death of the patient was accelerated, if not directly caused, by violence in handling.

* 37th Annual Report, Murray Royal Asylum, Perth, 1864, p. 12. Dr. W. Lauder Lindsay.

† Murray Royal Asylum, Perth, 1874. Dr. W. L. Lindsay.

Here and there, although there is a proclamation of *non-restraint* in the decorous columns of the annual reports of many English asylums, it is not uncommon, in the published reckoning of expenses, to find items of at least doubtful meaning, as so many pounds and shillings for "strong shirts" or "canvas," or, as in the Report of the Friends' Retreat at York, for 1876, an account of the painting of "seclusion room and passages," or as in the Thirteenth Annual Report of the Worcester Asylum (p. 51,) the following significant line, "stuffing pads for strong room—5£ 17s."

In more recent years there have not been wanting men of courage who have set themselves boldly against the pretense of non-restraint, on the high ground of duty. In the Forty-fourth Report of the Belfast Hospital for the Insane for 1873, Dr. Robert Stewart, Governor, (appointed by the Lord Lieutenant of Ireland,) will be found the following:*

It has been the exception to the rule during the past year, the having recourse to mechanical restraint, the disuse of which has been the regular practice here since the opening of the Institution, in 1829,† but in stating this it is not to be understood that cases do not occur in which it would be nothing short of both an act of cruelty, as well as a dereliction of duty, not to use the restraint of a camisole, or such like mild form of coercive means, for the preventing of danger to both patient and attendant, and no morbid fear of consequences should prevent medical superintendents from this discharge of a bounden duty towards their patients, when the occasion demands it of them.

Honor to the men who are not afraid to speak the whole truth, even as against a popular sentiment, begun by a mistaken idea of philanthropy, and fostered by sensational novelists of the stamp of Charles Reade.

* 44th An. Rept. Belfast Hosp. for Insane, 1873, Dr. Robt. Stewart, Gov. Pub. 1874.

pp. 28-30.

What necessities arise for the use of restraint may be gathered from an extract from the report last alluded to :

Here it may be appropriately stated, that during the past year the resident physician escaped almost by a miracle, a sudden and violent termination of his life, having been attacked on two separate occasions by two male homicidal inmates—in the first instance by an attempt at strangulation, and in the second by a severe stab in the face, close to the eye, with a sharpened knitting needle, which had it entered it, would most likely have been fatal. On two occasions afterward the same patient who stabbed the resident physician, similarly injured two of the male attendants, one on the face also, the eye having been wounded.

It is only a few months since one of the Commissioners of Lunacy, in England, met with an untimely death. He was officially visiting a hospital, and passing through a ward (where it was evident that the risk was taken in order to display non-seclusion and non-restraint,) when by the side of the medical superintendent, he was struck in the temple with a sharpened piece of iron by one of the chronic patients, and died a day or two after.

In the Twenty-first annual Report (1874,) of the Worcester (England,) Asylum, may be found the following : *

During the past year a suicidal wave has been perceptible in the persons under our care. Several during the day made determined efforts upon their lives, while in the presence of their guardians. These were all detected, and resulted fortunately, in no permanent injury. Two, however, of this class, were unfortunately allowed by their attendants to separate themselves from the ever-present supervision essential for their safety, and in consequence were enabled to effect their purpose.

He states further that there had been apparent improvement in both cases, when the culpable violation of regulations on the part of the attendants, viz.: not to permit such persons to be out of observation, resulted in disaster. He says farther:

In connection with this suicidal type of mental disease, another complication remains to be mentioned. Many patients, both of

* Dr. James Sherlock, p. 96.

the male and female sex, for months persistently employed themselves in causing solutions of continuity of the soft textures. This propensity existed not only during the night, but was carried on during the day in the most open manner, in spite of all remonstrances, entreaties and arrangements. Restraint was not employed to circumvent this perversion, but relays of persons were told off to guard against the continuance of the practice, and with only partial success.* * * Your superintendent has no reason to regret the course pursued in these cases; some of them have left the Asylum in an improved state of bodily and mental health, others remain here suffering from chronic insanity with symptoms indicating the existence of brain disease, the impulse in question has been abated, although not entirely suspended.

The logic which deduces such a conclusion from such premises is unanswerable.

It is to be observed of the same Institution under charge of the same gentleman, that in 1875, the twenty-third Annual Report records the following:†

Seclusion has been resorted to in the cases of thirty-one men and twenty-seven women; with the former on one hundred and sixty-nine and the latter on one hundred and nine occasions.

The question has been repeatedly pressed by the critics of American practice, to name the classes of patients in which we find the use of restraint serviceable. Without regard to the captious manner of the question, many of my brethren have answered, and the literature of the subject is rich in cases which it would be superfluous to relate. It may not be improper, however, to give some instances from the Case Books of the North Carolina Asylum for the Insane, of which I have charge, which will illustrate our clinical practice in regard to the several modes of protective restraint.

I. H. Epileptic Mania. Has paroxysms of violent excitement during which he imagines that himself and

* Worcester 21st An. Rept. 1873, p. 97.

† Worcester, Eng. 23d An. Rept. 1875, Dr. Sherlock.

others are engaged in building, or tearing down log houses, or other work requiring great force. He is proud of his strength, and to use his expression, "likes to fout for the fun of the thing." He is restrained to prevent violence to himself and others.

D. B. Chronic Mania. Was an open masturbator. At times excited and noisy at night, and practiced the habit in disgusting excess when he had the free use of his hands. It was directed that they be restrained. In the opinion of the writer, restraint has been of much service in his treatment.

V. V. Chronic Mania. A distrustful, suspicious man, who will quietly fix his eyes on some particular person, and without notice of his intention, seize his victim by the throat in the most determined manner.

W. P. B. Chronic Mania. Has paroxysms during which he will swallow anything practicable. On one occasion swallowed a piece of tin one inch square.

W. G. A. Melancholia. Refuses any request whatever. With much persuasion and some force, he eats enough to sustain life. Will not permit an action of the bowels if he can prevent it. To prevent urination, he places a ligature round the penis. To correct this, he is restrained at night, and watched in the day.

W. H. H. Melancholia. Strong suicidal tendencies. Has attempted to kill himself on several occasions. From his deportment, and the character of his delusions, he would probably succeed, if not prevented by restraint at night, and being watched during the day.

W. G. Chronic Mania. An open, unblushing masturbator, violent to self and others. Consider restraint of hands and out-door freedom better treatment than seclusion.

J. P. Chronic Mania. Persistently destructive to the clothing of himself and others, and to anything he

can depredate upon, and disgustingly filthy in his personal habits. His hands restrained at times prevent all these.

Dr. I. L. R. Homicidal Mania. Has on several occasions made most violent attacks on others. After so doing, he assigns as a reason, that his victim was plotting to injure him. He is restrained in the day, and relieved at night.

M. A. Chronic Mania. Restrained to prevent violence to others, and to self, exposure of person, and the destruction of clothing and furniture generally.

V. I. Chronic Mania. Restrained to prevent violence to others, and injury to self by abusing her person in various ways, as by slapping herself, beating her head, and plucking out her eyeballs. She unfortunately destroyed one eye, before she was adequately restrained.

M. W. Chronic Mania. Restrained to prevent masturbation and violence.

C. L. Mania. Subject to paroxysms of excitement, during which she will use any moveable thing, as a weapon on selected victims, which she has secreted while in a state of quiet.

F. W. Mania. When admitted, was excited and violent, and a persistent masturbator. He was treated with chloral, morphine and other remedies at night, but no benefit or improvement was shown until his hands were restrained. Is at home on probation, with fair prospects of recovery. Without restraint, he would probably now be in the Institution, in a worse condition than when received. It is proper to remark that by a provision of the State law, quiet and supposed harmless patients are from time to time removed to make room for the violent and dangerous cases that disturb the public peace.

We have one covered bedstead, and one strong room, but no padded rooms. The forms of restraint are of

the mildest character, consistent with effective value, but they are unhesitatingly prescribed and used as medical treatment.

After all, it is upon results that we must stand or fall. We will not rashly affirm that it is in consequence of continual struggles with attendants, and the amount of personal license, by night and day, allowed to the violent insane, that the long lists of casualties are to be found in the English reports; casualties whose details are so terribly suggestive of mortal combats or stealthy maniacal assassination.

We would not lightly use the *tu quoque* argument in a discussion upon a great fundamental principle of treatment of the insane. It is not the petty triumph of a bitter paragraph that we seek. But the facts are so momentous, and their bearing so decisive upon this question, that we are impelled to the ungracious task of pointing out the fatal deficiency in manual restraint, called "non-restraint," by the vision of the victims yearly sacrificed on the altar of an ideal dream. May their pallid lips speak from the grave in emphasis solemn and conclusive!

In a recent number of the *Journal of Psychological Medicine and Mental Pathology*, England, may be found an article entitled, "*Quis Custodiet Custodes?*" which recounts the homicides and injuries inflicted by persons of doubtful sanity within and without asylums, gathered from a limited number of periodicals, during the space of five months.

The author, who was a superintendent of an asylum for twenty-five years, says that he lives now a life of retirement, but still lives to learn. In a vein of exquisite irony he writes that the newspapers have taught him that his "opinions as to the immutability or indelibility of forms of derangement and degeneration were

altogether erroneous and untenable; that the type of mental disease had changed; that the mania furibunda described by former psychologists, and sculptured by Cibber was antiquated and forgotten; that there have been no pyromaniacs since Jonathan Martin, no insane parricides since Dodds, no insane regicides since Oxford; no homicides since the martyrdom of Myer and Lutwidge; that walls have been leveled, bolts and bars melted into ploughshares, and that seclusion in an asylum was now converted into sport in Arcadia. Now I am not old or soured enough to snarl sceptically at all this, to doubt that the reign of humanity is twice blessed, to set any limits to the powers of nature or of moral medicine. But I am sadly perplexed when there comes, through precisely the same channels, the hope-inspiring and the blood stained streams almost mingling together, the following facts:

1. That within a few months an attendant was killed by a lunatic in Leicester Asylum;
2. That one lunatic killed another in Durham County Asylum;
3. That a lunatic was killed in Greenock Poor House Asylum, and that an attendant was accused of killing him; and
4. That a lunatic was reported to have had his ribs fractured, &c., by an attendant in Northwoods Asylum, both being intoxicated at the time, the assailant being subsequently tried and sentenced in the penalty of a fine of £15, and two months imprisonment. Now my object is not to attribute the slightest degree of culpability, malpractice, or misadventure to any one connected with the above deplorable accidents, but simply to show that there must have been struggle, violence, fury, ferocity previous to the death blow. Nor, in adverting to one hundred and sixty instances of accidents, including several suicides, stated to have occurred within the safe and sacred precincts of asylums in Scot-

land in 1874-1875; in the annual report of the commissioners—which is the only record of such important data that we know of—would we breathe or harbor the suspicion that there was either negligence, or carelessness, or inadventure, or the absence of such precaution as might have prevented fractures and blows and burns, as our only wish is to direct attention to the sad evidence afforded that “the Millénium has not yet arrived in Bedlam.”

Brief statements are then given of forty-nine cases, including suicides, homicides, deaths from neglect, violent homicidal attacks, and injuries upon self and others.

In an article entitled “Lunacy in the United States,” published in the *British Medico-Chirurgical Review*, for July, 1876, appears the following:

We lately conversed with a superintendent, who led, perhaps awed, by the example of Conolly, never resorted to restraint, whose career has nearly reached that crisis when our professional as well as our personal errors come to be reviewed and repented of, and whose concluding sentence was, “Three things I bitterly regret—1st, that I trusted too little to stimulants; 2nd, too little to opium; 3d, *too little to restraint.*”

In the *London Lancet*, of March 18th, 1876, and subsequent numbers, Dr. Bucknill writes as follows:*

I regret that it did not occur to me to ask in this or in any other American asylum, to be permitted to inspect the register of injuries and accidents; but if such a record be kept, I think it more than probable that a faithful comparison of it with that which the law imposes on our own institutions would clearly prove that non-restraint does not encourage, nor restraint diminish or prevent the occurrence of injuries from violence.

This has so much of the humor of Charles Lamb, with his fashion of linking quaint unlikenesses, that one instinctively reads again to be sure that the

*Dr. Bucknill Art. in *Lancet*, March 18, 1876, repub. JOUR. INS.

good doctor has really written the paragraph as it appears. *He thinks* there ought to be a register, of injuries which *he thinks* has happened, and *he thinks* if that mysterious record could be discovered it would “*clearly prove* that restraint does not diminish or prevent the occurrence of injuries from violence.” Like the classic Arachne, here is a web of argument spun from internal consciousness; the unknown declared to be the known, and accurately conditioned to “clearly prove;” an assumption violent enough to form a casualty of itself, and held up *in terrorem* as proof. *A.* has a rabid dog that has been without sufficient control, and has destroyed many victims that are before us. *B.* has also such a dog, and therefore it must have been equally destructive, although *B.* has taken care to place said dog under restraint, and the supposed victims are not to be found. But apparently forgetful of his express regret that he had not asked for the register of accidents in his paper of March, the same distinguished gentleman, in an address before the Medico-Psychological Association on the 28th day of July, 1876, says : *

The Lancet censures me severely because I did not ask to be permitted to inspect the register of injuries and accidents. I should like to know if anybody has done so. If he has, I should like to hear him say so. I venture to think, that as a stranger in a far country, it was right not to return impertinence for courtesy, and that to do so is not the right way to obtain or impart information under such circumstances.

May it not be that there was a morbid expectation of dark mysteries to be found amongst us? The same distinguished gentleman comments upon “the pallid and emaciated appearance” of certain patients he observed in this country, with the idea that they were poorly nourished, as follows : †

* Dr. Bucknill's speech before Medico-Psychological Association, quoted *Jour. Ins.*, Jan., 1875.

† Dr. Bucknill, *Jour. Ins.*, Oct. 1876, pp. 141-2.

I know nothing of their dietary which, indeed, I have found to be a rather mysterious subject in all American asylums. I do not know that I ever met with a printed dietary in any American asylum or asylum report.

I leave to my brethren the task of reply to this criticism, merely observing that while it may be quite true that we do not print so much about what our patients are fed upon, when one reflects upon the comparative cheapness of the food in the two countries, especially in the article of meats, as universally used in this country, and by good authority, declared to be with difficulty sparingly obtained by the agricultural population of England, and more sparingly in Ireland, we think it is not necessary to expend much time and labor in reply. We do not feed our patients with Australian canned meat, it is true, but fancy that beef, with its juices, fresh from the meadow is no mean substitute. One thing we confess; beer is not an article of daily diet, but stimulants are with us, strictly employed as medicines.

We are puzzled to understand, upon the theory of slow starvation of our patients, how it comes to pass, that with fewer attendants and cheaper markets for provisions, the per capita expense in this country is so large, and in many cases, far beyond the per capita expended in England.

But this topic is a digression from the consideration of restraint, and has only been alluded to by reason of the alleged mysteries in American asylums. Have my brethren any objection to relating the history of their several institutions, in relation to injuries and accidents? We trow not. Under no system may we hope to escape them altogether, so long as the insane man is what disease has made him.

In a paper entitled "A Report on the Management of the Insane in Great Britain,"* prepared with the sanction of the authorities of the State of New York, and published under the authority of the Board of Charities of that State, by H. B. Wilbur, M. D., of the Idiot Asylum, Syracuse, N. Y., appears the following.

In looking through the reports for 1874, of twenty British asylums, containing in the aggregate about 15,000 patients, I find that there were but seven accidental deaths, these nearly all paralytics or epileptics; and only five suicides.

He does not see the one hundred and sixty instances of accidents within the asylums of Scotland for the same year, as given in the Annual Report of the Commissioners, but straightway compares the returns of his twenty selected English asylums with the reports of thirteen institutions in the State of New York, with twelve suicides, in 3,500 population.

The distinguished gentlemen who represent here the great Empire State, may speak for their own enlightened Commonwealth, as no others can. But I will say, in no spirit of boasting, but in that of reverent gratitude to Almighty God, that in North Carolina, in the Asylum at Raleigh, over 1,200 patients have been treated, through a period of over twenty one years, and yet not a single suicide or homicide stands on its records. In fact, there is no list for the inspection of the visitor, whether he ask it or not, because, under Providence, it has not begun.

Long immunity has not, however, induced us to throw away mechanical restraint in certain cases, but has the rather confirmed us in its use. I doubt not that many asylums in America can show a similar history. Results, after all, must settle a question like this.

*Report on the Management of the Insane, in Great Britain, Dr. Wilbur, pub. by Board of Charities. Note, p. 40.

In considering the practical status of the question of the use of restraint among the Superintendents of Asylums in the United States, page upon page might be cited to show the firm and unwavering, but liberal and moderate conservatism of their views.

Some recent expressions of sentiment are as follows. In the Report of the Butler Hospital, Providence, R. I. appears:*

In another quarter, it is claimed that everything depends on the removal of mechanical restraint, and leaving every patient to his own responsibility in taking care of himself. In the matter of mechanical restraint, it has always been the aim of our Superintendent to employ as little of it as was consistent with a proper regard for the safety of the patients, and the tendency has constantly been in the direction of an increasing freedom, although restraint is by no means abolished.

Dr. Catlett of the Missouri State Lunatic Asylum, No. 2, at St. Joseph, after recounting forms of restraint in use, says:†

It is far better than the personal efforts of one or more attendants, even if it were possible to command their services both during the day and night.

The authorities of the Vermont Asylum say in a recent paper:‡

To the complaints that the Institution has locked doors and mechanical restraints, we have only to reply that we have in use no safeguards or restraints not deemed essential to the proper management of every similar institution throughout our land.

Nowhere, however, do we find more happy expression on this point than in the Report of Dr. Curwen, for 1876.§

* Report, Butler Hosp., Providence, R. I. 1877.

† Report Missouri State Lunatic Asylum, No. 2, St. Joseph.

‡ Trustees Vermont Asylum, 1876, p. 15.

§ Pennsylvania Insane Asylum at Harrisburg, pp. 18, 19.

Experience and knowledge of the habits and feelings of those with whom they are daily brought into contact, have led the physicians of the hospitals for the insane in this country to prefer the use of such forms of mechanical restraint to the manual force of four or six persons; for in this latter case there is always sure to be a struggle, and neither the patience of Job, nor the meekness of Moses, nor the love of John, are inherent qualities in those who must perform such offices, nor, it must be frankly stated, if a judgment can be formed from the tone of their writings, in those who so urgently demand the abolition of all mechanical restraint.

It is not reasonable to believe, and as a proof of the statement let any one try it in his own person, that an excited, restless person suffering from acute maniacal excitement, will be as likely to sleep calmly and refreshingly with one person holding each arm, and one holding each leg, and a fifth holding the head, when the disposition so common when that number of persons are together to express freely their opinions on various subjects, as when the same patient is laid on a bed, and so fastened as to be able to turn from side to side, but not to rise from the horizontal position, a sleeping potion administered and every thing removed which can attract attention, or cause noise and confusion.

Besides, anyone who has witnessed the trial of the two methods must admit that the latter is infinitely preferable on every account, not only as far less likely to cause bruises, sprains or injuries to the patient, but also as much less irritating to the feelings and passions, and the cause of fewer angry words.

There are, however, some differences of opinion regarding treatment expressed. Here and there the strictures of our critics would seem to have impressed some of our brethren, and an eager disposition is manifested in some quarters to disavow the use of restraint. It is this fact which excuses the presentation of a paper upon a subject which has in former years, received such careful consideration.

Thus, we read in the Annual Report for 1876, of a far western hospital for the insane,* the following :

* Report of the Trustees of Nebraska Hospital for the Insane, 1876. Dr. F. G. Fuller.

There is, however, one feature of the management to which we wish to call especial attention; it is the almost entire absence of mechanical restraints upon the patients.

Page 56 of the same document, under Report of Matron has this entry—"6 Camisoles!"

In another report for 1876, proceeding from a member of this Association, whose valued services in the cause of humanity we all recognize :*

I said that the system of absolute non-restraint was confined to a few of the best British Institutions. We are pretty confident that there are none in this country in which its strict observance has been found, either expedient or practicable. In many other respects the American hospitals are superior to those of every other country, but it must be confessed, if the facts we have stated above be correct, that we have much to learn of the management of the insane from our friends across the water.

After relating disciplinary measures to insure vigilance on the part of attendants, by which means he has obtained the best, he continues :

We claim that the practice of manual restraint has almost ceased to exist in this hospital. There has never been one cent expended in leather muffs for the hands, bedstraps, restraining chairs, or any of the elaborate apparatus of the kind which is manufactured expressly for the use of hospitals for the insane. . . . It is occasionally found necessary to place an excited patient in his room for a few hours, and in extreme cases to confine his hands to prevent destruction of clothing or self-injury, while the nurse is otherwise engaged; but these are exceptional cases, and under a more liberal management than our present limited income allows, might never occur. The kind remonstrances, often the mere presence, of a faithful patient nurse, will soothe, in the large majority of cases, the maniacal excitement which restraint too often intensifies. We mention these things because they are truths which go to confirm the English view of the practicability of non-restraint in the institutions of this as well as other countries, and may encourage others, as they do us, in the hope and effort to abolish

* Alabama Insane Hospital, 1876, p. 25. Dr. Bryce.

completely and forever, the last vestige of that ancient abuse which the immortal physician of the Bicêtre was the first to demolish.

It is stated in the above report with regret that during the past year two suicides occurred, one by hanging, the other by drowning; being the first in the period of fifteen years. The case of drowning occurred in a patient who left the model attendant referred to, and plunged into the river near by. Alas, that the parallel to the English system of non-restraint should be so sadly suggested. We ask with all respect and honesty of purpose, if it be in taste, to create an erroneous public sentiment among the masses of the people, by stigmatizing as "the last vestige of an ancient abuse," that which the voice of the profession has pronounced a means of medical treatment.

Why not arraign a Brown-Séquard or a Nélaton when they administer the actual cauter, as clinging also to the last vestige of the torture chamber?

In view of the repeated and sometimes malignant assaults upon American asylums, within the past year or two it may be as well to state that we have no argument whatever with such journals as the *London Lancet*. A writer is worthy of scant esteem who is capable of such a sentence in reference to American Medical Superintendents as "their practice has no claim to be classed as medical, hardly can it be called humane," who says that they (we) are "low and brutal," and who states as a fact that "they use, at least, the hideous torture of the shower-bath, as a punishment, in their asylums, although it has been eliminated from the discipline of their gaols." Indeed, the word that most fitly describes such a so-called fact, is a brief one that would disfigure these pages to give it expression. This writer, as one would suppose from

the gross ignorance he shows, is without knowledge of us or of his subject, who, however, makes up in conceit what he otherwise lacks.

Nor is it perhaps necessary to review the recent declarations of Dr. H. B. Wilbur, in a paper entitled "Governmental Supervision of the Insane,"* read before the American Social Science Association, and intended to show how far behind our English brethren, this close corporation of American Superintendents is and how it has been left in darkness, waiting his illuminated research. It is perhaps sufficient to quote the concise judgment of the editor of the JOURNAL OF INSANITY, as follows :

The only comment we have to make is, that if Dr. Wilbur had practical familiarity with the subject of insanity, and any adequate personal knowledge of such institutions in his own country, he might not have seen such wonderful things abroad.

Or for the benefit of those friends to whom distance lends enchantment, we might recite the views of a learned writer in the *British and Foreign Medico-Chirurgical Review*, (July, 1876,) concerning Dr. Wilbur's report on the English asylums.

The Doctor's facts are of course, inexpugnable, but his impressions are derived from a few selected, celebrated establishments, and are contemplated through an atmosphere so *couleur de rose*, that an Englishman standing by his side, but embracing the whole field of vision, would scarcely recognize the picture, and might be inclined to look forward to such havens of rest as a premium on folly, and a solatium for all the ills that life is heir to.

Article VIII of the October number 1876, of the *Journal of Psychological Medicine and Mental Pathology*, upon Mechanical Restraint in the Treatment of the Insane, written by F. Murchuson, M. A., M. B., Edinburgh, assistant physician, Crichton Royal Insti-

*Governmental Supervision of the Insane, Dr. Wilbur.

tution, Dumfries, does not hesitate to proclaim the truth thus:

The extreme opinions at one time prevalent in Britain, adverse to restraint, have never obtained the same countenance or favor in France, America, &c., where mechanical contrivances still form a part of treatment. Even in this country the conflict between the dictates of professional duty and humanitarian sentimentalism is less keen than it was some years ago. The bugbear dread of public criticism has faded in cases where life or limb is known to be in danger.

"It is my firm conviction," says the writer again, "that the absence of mechanical restraint is the cause of the great majority of accidents, and of many of the suicides that take place in asylums; and that at the present day a diminution of the freedom of the patient, by restraint or seclusion, would minimise and perhaps abolish, these undesirable items in the statistics of asylums."

He gives numerous cases of the essential service of restraint, and advocates earnestly a disregard of popular clamor in the performance of duty.

It will be remembered by those who were present at the Nashville meeting in 1874, that Vice President Walker, then presiding, at the close of the discussion on this topic, made the following important declaration, from his own personal experience.*

I was gratified when visiting the institutions in England, the few I did visit, to find that almost universally,—certainly in four-fifths of the cases, the superintendents expressed themselves in favor of mechanical restraint, and singularly enough, the superintendents lay the blame of non-restraint upon the commissioners in lunacy, and the commissioners in lunacy throw it back upon the superintendents. They say the superintendents are emulous, one of another, to report the smallest number of restraints during the year. Certainly in my presence, and that of an American medical friend accompanying me, almost without exception, they expressed their preference for mechanical restraint, and hoped they would have it established there. From an experience of over twenty years, and from a careful, and I hope by no means super-

*JOURNAL OF INSANITY, October, 1874, p. 182.

ficial study of this question, I firmly believe, that in the future, the practice of our best American asylums now, will become the governing rule of Christendom.

This is the deliberate, well considered statement of one of the oldest officers, and one of the thirteen founders of this association, made of his own knowledge.

Dr. Bucknill recites these assertions of Dr. Walker at length, and says in reply :

I must resist the strong temptation to treat the above in the manner it invites, yet how to treat it seriously I scarcely know. Yet it is a most serious matter, and reveals the true foundation of the American prejudice—namely, profound ignorance of what has really been done, and is yet doing in this country.

Ignorant ! Yes—but we thought we had a Kirkbride among us, whose fame might even follow a Bucknill around the world. Prejudice ! Yes—but we thought we had a Gray whose cool and impartial JOURNAL OF INSANITY has no superior anywhere ! We thought we had a score of men competent to know what might be at the end of a week's journey !

We fear much is to be forgiven to the pugnacious nature of the distinguished gentleman. When Dr. Peddie refuses longer to discuss a grave question with him, in the *Journal of Mental Science*, because of the violence of his expressions, we must excuse the infirmity of speech which says of Dr. Walker's remark regarding the peculiarity of the American mental temperament, in connection with the need of restraint.

Verily we believe that this spread-eagle apology for the bonds of freemen is the most feeble, futile and fallacious which could possibly be imagined.

Or again, as he says of Dr. Hughes, that his remarks "are not worthy of an answer," and in the same breath accuses Dr. Ranney of "highfaluting" and "insincerity

that he must have felt." Faith, we are tempted to rub our eyes, and look about us for a Donnybrook Fair!

To others we must leave his harsh criticisms upon the "cooked air" in which our patients live, their mysterious dietary, their want of exercise, and non-participation in labor, their costly homes, and more than all, the dreadful deprivation of the great right arm of a Commissioner in Lunacy whereby "they lag lamentably behind the science of their age."

Leaving these topics to be discussed by other pens, we will say before parting, that the distinguished gentleman has paid some just tributes to some noble men on this side the Atlantic, who inspired him with personal regard, and that especially for his manly defense of President Nichols, before the Medico-Psychological Association, he deserves, and will receive the thanks of American Superintendents.

His challenge has been answered. "Frank" enough is our reply, and we also trust, as "fair."

According to Dr. Wilkins' carefully calculated report, the average percentage of mortality in American Institutions may be estimated at seven per cent. In the Institution at Raleigh, for the last ten years, it has not exceeded an average of over four per cent. annually.

There are two questions we would ask, with all due respect.

How comes it to pass that the last report of the English Commissioners announces a death-rate of 11.36 per cent. for the year upon the average daily number resident? So says the *Journal of Mental Science* for January, 1877. What, nearly one-eighth in one year? Can this be true? I will not imitate your example, Dr. Bucknill, and say that the want of mechanical restraint is the great stumbling-block, nor will this humble pen dare to impugn my good brethren in England. But

from the hollow depths of this abyss of mortality, a voice cries that something is wrong. Where is the *Lancet* Commissioner.

Our severe critic, and in some regards justly so, has pictured in thrilling language the condition of Blackwell's Island and Blockley Almshouse;—evils that our people are striving to remedy, as soon as it may be practically performed, and all he says of the wrong of partisan political interference is wise. But let Dr. Bucknill read of the local Irish asylums at his door, in the same journal,* and note this paragraph:

We think that where Governors refuse to provide beds and bedsteads for their increasing numbers, and keep patients lying during a hard winter on straw placed on the floor, as we have known them to do, the inspectors ought to possess a definite power of interference.

May we not commend that Eastern saying to our friend which has been happily translated. "Know most of the rooms of thy own country before thou crossest the threshold of another."

For ourselves, my brethren, we stand or fall, not upon the opinions of others, but upon the performance of a sacred duty; not in blind adherence to any theory, but such as experience may recommend. Let us see above all things, that we use and do not abuse, any means of treatment God has placed in our hands for the protection of his stricken creatures, and we may fear not when they and we come to a final judgment before the Eye that seeth all hearts.

As for our critics, let us rather thank them. The wise Abbe de Raunil said:†

Did a person but know the value of an enemy, he would purchase him with pure gold.

* *Journal Mental Science*, January, 1877, p. 597.

† Quoted in Basil Montague.

KATATONIA, A CLINICAL FORM OF INSANITY.

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One of the disputed points in the history of insanity is classification. Single symptoms, causes or modes of manifestation are taken to signify distinct types of disease. Some writers and some medical superintendents of asylums in their reports go beyond this even, for they give diseases, apparently evolved from their internal consciousness, which are neither acute, nor chronic, have no ætiology, pathology nor mode of manifestation, but stand alone, sublime monuments to the scientific use of the imagination.

The principle laid down by Voisin in his "Clinical Pictures of Insanity," that classification to be rational, must be founded on the logical association of the clinical symptoms, the ætiology, and the pathological anatomy is the only one, as yet offered that is justifiable on any ground, than that of mere hypothesis. Such a principle may give rise, without doubt, to many new divisions of insanity, but even then they can scarcely be more numerous and more unwieldy than the divisions of the much lauded system of Skae. This principle has been independently adopted by a German observer, who is engaged in clinical researches similar to those of the French psychiatrist, Doctor Kahlbaum, Medical Superintendent of the Private Asylum at Görlitz, Prussia, to whose observations are due the recognition and clinical demarcation of the subject of this paper.

The first volume of his recently published work, is devoted to consideration of the forms of disease in ques-

tion. He claims that the distinguishing characteristic is an irregularity, or as he phrases it an insanity of tension, mental and muscular, whence the name Katatonia. His conclusions (which have received the approval of Meynert, Westphal and Von Kraft Ebing,) are that Katatonia is a distinct form of insanity having its own clinical history. Maudsley under the insanity of pubescence, and Bucknill and Tuke under choreomania, have noticed some of the individual symptoms, but have drawn no conclusions therefrom. The first symptom is like that noticed in the inception of other forms of insanity, a change in the temper of the individual. It presents at times well marked motions of a rhythmical character, always under control of the will. In this respect, while bearing some resemblance to, it is very distinct from chorea.

Another characteristic, but one which is not noticeable, unless the case be observed from the inception to the close, is its cyclical character, maniacal, melancholic and cataleptoidal conditions alternating, with more or less imperfect convulsive attacks; there are also pathetic delusions of grandeur, and a tendency to act and talk theatrically. Erotic manifestations of some kind frequently occur, and, as is usual under such circumstances, the patient's ideas have a religious tinge. At any stage, as in other nervous diseases, remissions, or as is claimed, but I think erroneously, by Kahlbaum, complete recovery may occur. If the case is to end unfavorably, periods of excitement and stupidity recur, with more and more frequency, and the patient dies, with terminal dementia. The clinical history is best illustrated by the following cases.

CASE I.—T. R., age 36, policeman, single, common school education, intemperate, as were also his parents. The patient had been a masturbator, and had

indulged in sexual excess. He was at first melancholic, subsequently maniacal, but recovering therefrom became what his fellow-policemen called "stuck up." His temper changed from good humor to irascibility, and asylum treatment was at length rendered necessary. He was admitted to the New York City Asylum for the Insane, March 17, 1873. A week previous he had gone to church, but soon returned, saying he had been followed by "droves" of dogs. He was a tall, powerful, good humored man, and though he asserted he would not commit suicide he had cut off the tip of his ear in an attempt of this kind. He was somewhat subdued in manner, and had hallucinations of sight and hearing. The day previous to admission he was affected with a spasm of the muscles of the extremities. Five days after admission he manifested delusion that he had committed a great crime, and refused food, but said: "This is not a penance for the crime." He required artificial feeding for three days, took food voluntarily on the fourth, and again refused it on the fifth day. A period of excitement then occurred, and he became the subject of hallucinations, differing from those he had on admission. After treatment a short time with opium and hyoseyamus he grew quiet and took food voluntarily, but very suspiciously. In about a week after, a spasm of the muscles of the neck, followed by slight unconsciousness and slumber, occurred, the pupils dilating widely, and so remaining for a few days. Two weeks after, he had very sluggish movements of the lower extremities, bearing a suspicious resemblance to functional paraplegia, but this was really an *incomplete* cataleptoid condition, involving also the muscles of the neck and upper extremities. The patient opened his mouth, and performed other simple actions of that nature; these, however, were not idea-

tional, but sensori-motor acts, as his attention to the subject was nil, and he was in a peculiar emotional state. That all the mental faculties were not in abeyance was shown by the fact that he involuntarily raised his hands in an attitude of supplication, or as an acknowledgment of a favor just received. His pupils responded to light, and the organic functions were performed as usual. This condition continued for three days with very little change, except that when asked to perform a simple action the request would be obeyed, and the action continued indefinitely in an automatic way.

Five days after the beginning of the condition just mentioned, the patient had a rapid, feeble pulse the beats of which ran into each other and did not correspond with the heart's action, which, though rapid, was otherwise normal. His eyelids and lower extremities soon became œdematous and the cataleptoid condition disappeared. The heart's action grew more irregular, the first sound being alone audible, and accompanied with a loud, blowing murmur heard at the base. Pulse one hundred and thirty-two and more rapid in the neck than at the wrist; respirations were increased, the lungs and temperature being normal. The heart's action soon returned to its normal condition, and the murmur disappeared. The treatment was directed to the alimentary canal only. The patient then became entirely unconscious as to his surroundings, though taking food and performing other actions, involving only the organic functions, normally, and so continued for about a week. He then began to have tonic contractions of the muscular system, followed by the lessening of the œdema which finally disappeared. The cataleptoid condition then returned and was accompanied by considerable waxy mobility. Two days after, his muscles were ex-

tremely rigid, and he remained apparently unconscious for sometime. One morning he suddenly spoke and being asked his reason for not speaking before said, "They told me not to," and when asked who told him not to, replied "God and others," and began to weep.

The following day he had a return of the cataleptoid condition in which he remained for some time. These alternations continued for three months, when he became suddenly violent, tore off a bar from the window and tried to make his escape. This excitement continued three days, the patient then passing again into the cataleptoid condition, on emerging from which he was markedly dignified, and very formal in conversation. This manner of speaking and acting continued for three months. He then had another cataleptoid relapse, succeeded by an attack of melancholia attonita. Then followed a condition during which his pupils at first contracted and then dilated; his left hand contracted firmly, and from it a quivering motion extended over the left side, and gradually involved the entire body. The irregularities of circulation formerly observed once more appeared, and as before went away without special treatment.

Melancholia attonita became the predominant condition, accompanied however, by increased susceptibility to external influences. This remained four months, and was followed by a cataleptoid condition with much waxy mobility. While in this state he was found to be developing phthisis. The disease ran a rapid, somewhat irregular course, terminating life July 22, 1875, twenty-six months after his admission to the Institution.

The details of the post mortem were as follows: Thoracic cavity; lungs the seat of tubercles, some undergoing softening, others calcification; remains of old

adhesions in the pleura. Heart, normal. Abdominal cavity; the liver was slightly cirrhotic; kidneys, normal; the mesenteric glands tuberculous, and undergoing same changes as the lungs; spleen congested and somewhat enlarged; the intestines somewhat congested and inflamed. Head-scalp thick; cranium normal, with the dura mater adhering to it in patches. There were firm coagula in the veins and sinuses. The arachnoid, especially over the fissure of Sylvius, was very opaque; the pontico-chiasmal lamina were very dense, and a pseudo-membrane was formed beneath. There was dullness of the membrane of moderate character between cerebellum and medulla oblongata. Epithelial granulations present in a rudimentary condition, pia mater removable from cortex except over frontal lobe. Cortex pale, a decided sinking of the surface of certain gyri below neighboring convolutions. There was a fusion of the opposite sides of the anterior cornua of the lateral ventricles. Cysts of choroid plexus were also present.

The first peculiarity noticeable in this case is its cyclical character. The tendency to act and speak theatrically is not so prominent. While this peculiarity has perchance attracted the attention of many alienists, it has been regarded as a curious fact, and dismissed to the limbo of unrecorded observations. Most of the peculiarities of the insane, have their correlations in the actions of the sane, and this forms no exception to the rule. The tendency of the paretic to wander, with his proclivity for arson, have their parallels in the conduct of the chronic revolutionist, and the prominent mental symptom of "katatonia," "verbi-geration" as Kahlbaum calls it, finds its analogue in the chronic stump speaker. It is a peculiarity likely to attract attention from its occurrence in the compara-

tively ignorant, and with other prominent symptoms is well illustrated in the following cases.

CASE II.—W. H. G., aged 26; colored, laborer, married, intemperate and syphilitic. Mother had been insane, but recovered. The patient one day while at work fell down suddenly, and his face and arms began to twitch; from this he soon recovered, but in two months became much depressed, and was placed in the City Lunatic Asylum, where he soon became maniacal and violent, which condition was followed by a period of depression with hallucinations. He suddenly refused to eat, and soon after passed into a cataleptoid condition, from which he emerged one morning; said he "was equal to any white man," and spoke very precisely. He was afterwards taken out of the Asylum by his wife, and December 11, 1871, two months after this was readmitted, and after having remained two months was discharged improved. He was readmitted during 1874, then in a condition of melancholia attonita, out of which he gradually passed. When speaking he always observed great precision, and if he supposed the expression used was not correct he would alter it until he found one that might with propriety be substituted for it. He remained in this condition till July of that year, and was again discharged. He was readmitted March, 1875. Held his head up in a very consequential way, and prefaced every reply to a question by the phrase, "I do not doubt but what." "What is your name?" "I do not doubt but what it is William Henry G." How old are you? "I do not doubt but what I was born in the year 1838, so my mother said." Where were you born? "I do not doubt but what I was born in some part of the world." What part? "I do not doubt but what I do not know what part." His memory was somewhat deficient but not materially

so, as he remembered that he was there before, that he went out on a furlough, and the physician's name. He was well built and comparatively strong, and while speaking wrinkled his face very much; this was somewhat of a sensori-motor act, and under the stimulus of some emotion, at variance with his "verbigeration," disappeared. Patient retained his peculiar manner of speaking and acting, but grew less inclined to walk about, would remain for hours in an upright position, staring straight ahead at vacancy. He manifested moderate erotic desires.

CASE III.—P. D.; Irish; aged 28, of intemperate habits, unmarried, of very ordinary education. The attack of insanity was preceded by dizziness. He entered the Asylum in a condition of melancholia approaching catalepsy. He brightened up somewhat in a few days, but was averse to conversation. About a week after admission he suddenly became communicative, said he had wasted time and opportunities, had led a loose life, and was now suffering the pangs of remorse. Excessive drinking and the loss of near friends were the causes he assigned for the present attack, of the nature of which he was quite conscious. He had then apparently no delusion, and was coherent. This mental condition continued for two months; there was no delusion present, and the mental tone was that of depression. Every idea expressed had that tinge. He said: "I have suffered blank disappointment in life. Men whom I expected were just and honest have been found wanting." He declared at the same time, with strong emphasis, that he had had no disappointment of the affections, as his ideas did not run in that channel. When asked to give the loss of friends that he had suffered in detail, said, "A host of tender emotions are thus raised that had better be quieted." The

abstract sentiments were regarded by him as more sacred than the affections. The peculiar sensibility of the brain to depressing influences was undoubtedly heightened in his case, but not so much as to prevent a pleasureable feeling when excited by other emotions. He was very formal in conversation, and though his condition would not in a man of culture necessarily be morbid, yet in his case it was, because of its spontaneous origin, and of its being purely subjective. His proud semi-dignified, semi-melancholic expression, varied by an irregular play of the muscles concerned, was a fair index of his mental condition, for he was unable to give the bond of association between the tender emotions and the causes exciting them. His treatment consisted in hyoscyamus, cannabis indica and whisky. About a month after the commencement of this treatment, the patient said he had found food for thought and wisdom, in the stability of the Christian religion, but dreaded events would go wrong in the future. When asked "what events" could give only his probable failure to obtain work. He remained a week in this state, then refused food and passed into a cataleptoid condition, with incomplete waxy mobility and irregular movements of the fingers. This lasted a week, he then spoke a few words, but continued to decline food, refusing to explain his action. He required artificial feeding for two days, then took food voluntarily and spoke freely; said, "that he was the son of a Portuguese noble, who had gone to discover the source of the Nile, and who was interested in literary pursuits, having written Virgil." Symptoms of phthisis made their appearance, and the patient being placed under tonic treatment improved somewhat. A month after cataleptoid conditions alternated with maniacal attacks, which were accompanied by hallucinations of

sight. The patient died of phthisis a year after the first appearance of the symptoms. In this case the speech-making tendency was well marked, and, from the imperfect training received by the patient in early life, was very noticeable. This symptom, with a tendency to the use of peculiarly formed words, observed in one of Kahlbaum's cases, is to be found in a greater degree in the following case.

CASE IV.—J. E., aged 26; single, moulding-maker, fair education, intemperate. Admitted to the New York City Asylum for the Insane, September 23, 1874. Five weeks previously had been arrested for intemperance, which caused him to become very much depressed. After his release went on a spree, and while intoxicated fell down a cellar, striking on the back of his head. Shortly after this said that he heard voices threatening him; that everything was turning round. In obedience to these hallucinations he cut his throat, fortunately avoiding any important vessel, and causing only a flesh wound. On admission the patient seemed to have considerable difficulty in talking, opened and shut his mouth as if speaking, but did not utter a sound. He stared at everything with a very contemptuous expression. On the following day he spoke freely, but without any apparent difficulty, and said that he had attempted suicide because he heard voices threatening him. This communicativeness lasted only a short time, and was then replaced by the condition present on admission. Two days after he appeared to realize his condition, and said that intemperance and the injury to the head were the chief causes of his mental trouble, which he recognized. For a fortnight he remained much the same. He had a defective remembrance of events in the immediate past, and exhibited a tendency to repeat a question several times, in a confused manner, before

answering it. A week after this he cleared up markedly; said he had masturbated from the age of fifteen, and had drank as many as thirty glasses of beer a day. The confused appearance and defective memory returned, and were accompanied by considerable depression. In a fortnight the condition of the patient was the same as at the time of his admission. Five days after he said he saw blood on everything he looked at. In the course of a month he became very stupid, took off and put on his clothes purposelessly, and at length passed into a cataleptoid condition with waxy mobility, but offered very slight resistance to any attempt at movement. Artificial feeding was required for two days. He then took food voluntarily, spoke occasionally, but showed much confusion of ideas. A month after he had improved very much, and expressed a desire to go out and attend to his affairs, but had no recollection of his late condition, and the circulation in the extremities was very sluggish. He continued to improve, but was not considered recovered, when six months after, his friends, against the advice of Dr. Macdonald, the medical superintendent, removed him from the asylum. He was brought back in six days, and then said "that his father was a witch and his mother also, she having poisoned his food and bewitched the house, causing what he is unable otherwise to account for, the occasional stopping of the house clock on the mantelpiece." He had at times returns of the cataleptoid condition, with maniacal alternations, followed by a tendency to express the contrary of any proposition that might be made. These statements were intermingled with diatribes against the other patients, and expressions indicating a belief in his own importance. He made gestures sometimes indicative of devotion, but more frequently of contempt. Soon after the appear-

ance of the last mentioned symptoms, he spoke in German about religious matters, but gradually changed to remarks about a girl he had seduced. Three days after he became maniacal, relapsing in two weeks into a cataleptoid condition, followed by rhythmic movements of the fingers. He now began to speak (in English,) and said, "I am Arminius and have swallowed J. E." He was very consequential, resisted any intrusion on a fancied privilege, and once knocked down a fellow-patient for sitting on the same bench with him. A period of excitement then appeared, followed by a relapse into the cataleptoid condition. On emerging from this, the rhythmic motions once more appeared, followed by incessant talking in German, implying that his family descent was noble, and making a semi-demand, semi-appeal for the regard due him on this account. A succession of the same phenomena as before then occurred, but the increased talking was in no known language. It was however, articulate, and he made many attempts at oratorical display. The patient still remains in this condition.

In the four cases thus far given there is a family likeness, modified it must be confessed, by surrounding circumstances, but such as to leave no doubt that they belong to the same clinical type. Thirty cases have come under observation having the same irregularity of mental association and cyclical character. One of the cases came to the asylum at the time of and apparently through the excitement of the Moody-Sankey revival. On examination of the case, however, it appeared that the father had died from phthisis; the mother also had the disease, and the patient himself had had meningitis at the age of ten, that he became insane therefrom, but recovered within a year and remained in mental health for seven years after. The fact of this case occurring during

religious excitement is not peculiar, as that has been assigned as the exciting cause in many instances.

All the forms of religious belief have furnished cases of this kind, and they have even occurred during a polytheistic reaction from Christianity. Kahlbaum claims that the disease is very rare. My own conclusion from the facts coming under observation is that while the statement is apparently true, in reality the cases are frequent, but pass unrecognized.

Many cases are discharged from an asylum during a remission and are lost sight of, but return or enter other institutions with peculiarities that puzzle the medical attendant in classification. Such has been the experience with a few cases discharged at this stage, preceding my connection with the City Asylum, and which subsequently returned. The peculiarities of these cases are so frequently described in connection with the insanity of pubescence and menstruation, that there is little doubt that the disease, though not so frequent as general paresis, is entitled to a distinct place as a form of insanity so far as frequency of occurrence gives any right to the same.

Causation is always an obscure, and very frequently a disputed point in the history of insanity. It is set forth at great length in asylum reports, but he who expects to derive positive information on the subject from the statements therein contained, will be frequently disappointed. Either the mental or the physical influence is ignored, or both are so combined as to lead to erroneous deductions. Forbes Winslow's ten thousand cases of insanity in the United States caused by spiritualism is a recent example, and has been much commented upon. The only way to arrive at any definite conclusion is to take such facts as are given concerning the patient's ancestry, habits, age, education, civil con-

dition, mental peculiarities, surrounding circumstances, the presence or absence of physical disease and of traumatic influences, and then to deduce the logical relation of cause and effect.

Examination of the thirty cases coming under observation, in accordance with this principle, shows that in ten cases, one of the parents was phthisical; in three, the father was phthisical and a paternal uncle died of hydrocephalus; in two, the mother died of phthisis and a maternal uncle died of hydrocephalus; in four, the father was intemperate; in five, syphilitic; in two, a maternal first cousin had been insane; in one case the mother, and in another an aunt was idiotic. Twenty of the thirty cases were intemperate, three took stimulants moderately, and seven were abstinent. Twenty-six of the thirty cases were below the age of thirty; eighteen had received the ordinary common-school education, four a high-school, two a liberal, and six the ordinary education amounting to an ability to read and write. Twenty-five were single, and five married. Twenty-two admitted the practice of masturbation; of these thirteen were in addition addicted to sexual excess, as also were three of the remaining eight. Twenty were religiously inclined; three were opposed to religion, not however, from a disbelief in doctrine, though they lived in defiance of its moral code; the remainder came under the head of what the religious press call indifferentists.

Fifteen of the thirty cases were somewhat quiet and reserved, four were jovial and pleasure loving, and of the remainder little definite information could be obtained. Concerning ten it was ascertained that they had been, what was called by their parents and relations, very studious, the study consisting in the perusal of works of fiction, sensational and biographical. The patients

in three cases were in good circumstances; in ten belonged to the lower middle class, while the rest were from the lower class; in three cases the patient had in early life meningitis; in fifteen there was some evidence of scrofulous disease; in ten no history of preceding nervous or other chronic disease could be obtained. Of the thirty, all but one gave a history of rheumatism, and that was not articular, but muscular. Four had received injuries to the skull which, however, were said to be of a slight character.

The first deduction following from the facts already given, is that the inheritance of a scrofulous diathesis acts as a great predisposing cause, a conclusion borne out by the pathology of the disease. Age appears also to act as a predisposing cause. The influence of stimulants either as an exciting or predisposing cause, seems limited; the most logical conclusion being that since the proportion of those abstaining from stimulants is relatively greater in this than in the other forms of insanity, therefore the influence of alcoholic stimulants is antagonistic, rather than favorable to the production of the disease; in forming this conclusion, however, the prevalence of intoxication among the class from which many of the patients are derived, is taken into consideration. The influence of education can best be seen in its effects, rather than its amount, it being in most cases regarded by the patients, not as an end, but as a means toward an end; in short a property entitling the possessor to certain privileges. These effects of education led to depression on the part of our patient, because of his not receiving the consideration which he conceived its possession entailed. The determination of the influence of masturbation, and whether it is not an effect, is a question that requires some discrimination to decide. The practice, however, aided in reducing the already

diminished vitality of the patient, and therefore, in adding to the existing depression.

Most probably masturbation was to some extent an outcome of the general morbid condition of the nervous system, and aided in increasing this. The influence of sexual excess was of a like nature, as the disease occurred at a period when the sexual passion was in process of development. Religious excitement like the sexual element, with which it is in close alliance, was both an effect and a cause. In individual cases coming under observation, there have been two phases, first, the patient's excessive devotion results in claims to extraordinary religious privileges; secondly, a depression is produced during semi-lucid periods by the evident contradiction between the duties of religion and the strong sexual desires, which often control the conduct. The influence of the literature usually perused by this class of patients, is very obvious from its effect on normal minds, leading to a luxurious day-dreaming propensity, and a disinclination to active exertion whether mental or physical. On a morbid condition like this, peculiarly suited for the reception of such impressions, the result must be much intensified, for what in the normal condition would simply be a day dream, in the disease, is converted into a delusion.

The influence of surrounding circumstances is perhaps nowhere stronger than in the United States. On the one hand examples of self-made men are held up as incentives to effort for high positions, while on the other the absence of wealth is regarded as a strong evidence of incapacity. Traumatic causes appeared in these cases to have had a slight influence in modifying, rather than producing the disease, which had existed before the beginning of their action. One of these cases has already been cited. The most

frequent predisposing cause, as already stated, was the inheritance of a serofulous diathesis; the other influences acted often as exciting causes, though at times they only increased the predisposition to the disease. That an acute form of disease directly traceable to the inheritance of a serofulous diathesis, resembles katatonia very much in its general features is shown in the following case, from the *Virginia Medical Monthly*, September, 1876.

A young man 17 years of age, exhibited symptoms of mental aberration, consisting in an inordinate loquacity, a talking maudlingly on a great variety of subjects without pursuing one continuous train of thought. He was not insensible, and when spoken to, answered quite rationally, but immediately relapsed into the condition of incessant talking. The patient being sleepless, hydrate of chloral and bromide of potassium were given with good effect. About the end of his first week of illness he became very obstinate, but still answered rationally. During the second week he grew worse, bowels became constipated, and he had a temperature of 101 to 101½, a pulse of 120 to 140, with exacerbations in the evening. He soon began to show depression, accompanied with paralysis. Soon after there was a febrile reaction, a temperature of 102, a pulse of 120. His head was somewhat retracted; he was violent and impatient of restraint. Both pupils were normal and he was totally unconscious. By the end of the second week he was still unconscious and the pupils were widely dilated, head still retracted and very much emaciation present. At the close of the third week his pulse was 70, temperature 98° and the patient was rational. One child of the family died from acute, and one from chronic hydrocephalus, and another was, at time of the illness of our patient suffering from tubercle of the peritoneum.

This case resembles in many respects those already given, but the vagueness of the terms used show the reporter to be a poor psychological, although a good clinical observer and pathologist. These views as to the influence of heredity are likely to raise a disputed question, which will be considered under pathology. The post-mortems given by Kahlbaum show evidences

of a healed up hydrocephalus and a basilar meningitis, which, the post-mortems I have made, confirm. Meynert's deduction from Kahlbaum's cases, is that the disease has been preceded by a patho-meningeal process, located at the base of the brain, and over the fissure of Sylvius. My own opinion from the cases examined is, that the disease has been most frequently preceded, during infancy, by a basilar meningeal process of a tuberculous character. In a patho-psychological aspect the localization of the process would be over the base of the brain, in the fourth ventricle, and over the fissure of Sylvius. According to Dr. O. Schultze, the motor symptoms in basilar meningitis, are due to an acute spinal affection, occurring at the same time as the cerebral affection. Leyden maintains that tubercular, spinal and cerebro-spinal meningitis, the existence of which has been but little suspected, is certainly possible, and indeed, highly probable. Magnan, Lionville, Hayem and Schultze, all agree that this affection is very frequently present. Schultze concludes that the stiffness occurring in the course of so-called basilar meningitis, with the contractions of the muscles supplied by the spinal nerves, do not have their origin in the brain, but are due to the affection attacking the spinal cord; that these symptoms occur on account of the progresison of the inflammatory process from the membranes, by means of the vessels, to the nerve bundles; and hence, partly from the inflammatory irritation of the nerve bundles themselves, and partly on account of the irritation of the spinal cord in which myelitic changes are found. As has already been hinted at, one point raised by the pathology, is the question of recovery from tubercular meningeal processes.

From the post-mortem already given, and from others coming under observation, my opinion is that tuber-

cular meningeal processes are more frequently recovered from than is generally supposed; that in reality many of the cases of so-called hydrocephaloid disease are really hydrocephalus. This inference is further sustained by a somewhat limited, though conclusive experience with children. I have seen four cases recover and two die, the symptoms in all being in no way distinguishable from those given as characteristic of hydrocephalus. One case which died, and one of the recoveries belonged to the same family, in which there was a strongly marked tubercular taint, as was also the case in another family which came under observation. It may be said that no post-mortem of a case of hydrocephaloid has shown that the lesions of it and hydrocephalus are identical. This argument is apparently a good one, and at first sight seems strongly against the position taken, but as all cases that die with certain symptoms are considered hydrocephalus, and all who recover hydrocephaloid, though they may have the same symptoms, the value of the post-mortem argument is rather doubtful.

These views regarding recovery from tubercular meningitis have, to a certain extent, the support of Hasse, one of the best authorities on the subject. Though the pathology shows that tubercular meningitis may be recovered from, still the brain is not restored to its normal condition, but is so far damaged as to yield when a strain is applied. The patient, of whose spinal cord and brain this microscopical examination was made, was thirty years of age; intemperate, of ordinary education. He made well marked rhythmical motions, had maniacal and incomplete cataleptoid alternations, followed by theatrical talking. His spinal cord, as will afterwards appear, showed changes which would seem at first sight to confirm the opinions of Lionville, Magnan and

Schultze, but in reality are opposed to the conclusions of these observers, being, not as might be surmised, a cause, but an effect of the cataleptoid alternations. The disease had existed at least two years, and the patient died from tubercular enteritis.

Post-mortem.—Body emaciated, cadaveric rigidity well marked; lungs, seat of tuberculous deposit; heart, normal; tubercle of the intestines and peritoneum; spleen, congested; kidneys, normal; liver, cirrhotic; head, dolichocephalic; scalp, thin; cranium, thick and not adherent to the dura-mater, which was normal. Sub-arachnoid space filled with a number of brownish flakes of a gelatinous consistency; most of these drained away with the cerebro-spinal fluid, but a few were quite firmly adherent to the underlying pia-mater; minute blackish or dark brown grains were disseminated through these, probably exudative products.(?) Arachnoid of base, pontico-chiasmal lamina, perfectly healthy, clear, and transparent; cerebello-medullary lamina, opaque, with whitish, dense bands. Sylvian fissure, slightly opaque. Pia-mater along the larger, and in some instances along the finer vessels, minute pale yellowish, whitish, and reddish bodies were found, supposed to be tuberculous. In the Sylvian fossa itself, over the island of Reil there was a fusion of the leptomeninges.

Blood vessels. A whitish spot, measuring one and one-half inches in every direction, existed on the under surface of the basilar arachnoid; the large veins were filled with dark continuous coagula, or with chains of whitish connected thrombi, such as occur in the ultimate agony, when prolonged, in exhaustive diseases. The fine network of vessels was injected, and this condition was especially well marked over the island of Reil. Convolutions, few, simple and typical. The white sub-

stance of the centrum ovale of Vieussens, of the pedunculi, cerebellum, ganglia and tegmentum, as well as of the medulla and pons, showed numerous punctæ vasculosæ, all of a strikingly venous character; in every direction the veins, and these alone, were filled with blood. This was also true of the cortex, and was nowhere better pronounced than in the gyri-operti of the island of Reil. The claustrum which I have never before seen the seat of any marked injection, was filled with distended venous channels and puncta venosa. The grey ganglia at the base of the fourth ventricle, which depend for their color on the degree and kind of injection, as well as on the pigmentation of their cellular elements, appeared semi-transparent and cerulean in tint. Spinal cord; membranes healthy, no deviation from the normal standard; cord itself decidedly anæmic. Ventricles; a mucoid substance covered the parts at the base of these cavities, particularly well marked at the calamus scriptorius of the fourth ventricle. Over the stria cornua of the left side, the ground glass appearance was visible; this passed gradually into the mucoid substance on either side. Dilatation of the posterior cornua of the lateral ventricles existed, this extended backwards, and there was adhesion of the walls, so extensive on the left side as to cause the complete separation of the apex of the posterior horn from the body of the ventricle, giving it the appearance of a cyst in the occipital lobe. There was a beautiful venous injection of the ventricular lining.

It may be said in passing, that Meynert, two years before Kahlbaum, described katatonía, called by him a peculiar form of melancholia attonita, as "characterized by a series of fluxionary excitations, toned down by co-existent cerebral pressure, microscopic exudations, ventricular dropsy, and (perhaps) premature

ossification of the sutures. From these would result forced and theatrical activities on the part of the patient. The convulsive state indicates the control of the irritative factors; the cataleptoid condition, the triumph of the depressing factors. The ideas of grandeur, following upon stupor, are the results of ideas previously caused by fluxionary conditions."

As the microscopical examination is perhaps the first as yet made in this class of cases, it was of importance that the observations should be under the supervision of one accustomed, not only to observe, but also to interpret observations. For this reason, and also because of the great advantage derived from two observers working at the same time, the result obtained may, in a great measure, be attributed to the kind assistance and supervision of Dr. Spitzka. They are certainly of a nature to throw some light on the clinical manifestations of the disease.

The mucoid matter on the floor of the fourth ventricle was found to consist of an accumulation of round cells, not surpassing a red blood corpuscle in diameter, some nucleated, others not; all were perfectly colorless. Interspersed among them were larger elements, identical in every respect with white blood corpuscles.

Isolated bodies of an oblong shape with a distinct nucleus and pellucid protoplasm were noticed. All these were imbedded in a granular mass which showed a formation of imperfect fibrils. The arachnoid exudation consisted of the same matters together with a fair proportion of red corpuscles, large flakes of pigment and round spheres of a protean nature. The pia-mater of the convexity exhibited numerous small nodules, most of which were molecular, others calcareous, and a few contained large and small polynucleated cells; these nodules were periadventitial and hardly visible to the

naked eye. The cortical substance of the island of Reil showed a marked increase of the nuclei of the neuroglia. The ganglionic cells, both pyramidal and fusiform, were normally contoured, processes well developed; protoplasm healthy, in some cases diffusely pigmented, and nucleus round and clear. Free lymphoid bodies were accumulated in the pericellular spaces in prodigious numbers, in one instance, no less than twenty-three of these cells could be distinguished clustering around one pyramidal nerve-cell of the third layer. Frequently the nerve-cell was altogether hidden from view by such cell groups. In this respect the island of Reil presented marked regional differences. It was found that areas varying from a line to an inch in diameter were the seat of this appearance, while a similar, larger or smaller adjoining area was either less involved, or perfectly normal in this respect. The transition from the affected to the healthy areas was sudden.

The coats of all the vessels were entirely healthy, presenting no deviations from the appearance of cerebral vessels in sane subjects. The arteries were empty, the veins and many capillary districts filled with blood corpuscles; these latter were individually distinct, not compressed or fused by crowding as has been described to be the case in the stasis accompanying general paresis.* This engorgement was most marked in those areas, in which the accumulation of lymphoid bodies was farthest advanced. The periadventitial space was filled with similar bodies, in the case of the vessels referred to. The same appearances in a lesser degree were noticed in the operculum, and the convolutions bordering the anterior part of the great longitudinal fissure. The remainder of the cortex cerebri appeared perfectly healthy. The accumulation of lymphoid bodies was

* Spitzka "Patho-Psychology of Progressive Paresis."

still more marked in the nucleus lenticularis, than in the claustrum and island of Reil. The cerebellum, olivary bodies, nuclei of the cranial nerves, corpus striatum, thalamus and corpora quadrigemina, presented no deviations from the normal standard.

Spinal Cord; the nerve-cells of the grey cornua were perfectly healthy, a delicate granular material filled the dilated pericellular spaces; central canal open. The white columns showed everywhere an increase in the number and thickness of the connective tissue septa, and of Fronemann's cells. With this the medullary sheaths had undergone a slight degree of atrophy, while many axis cylinders were hypertrophic.

These conditions were most marked in the antero-lateral columns of the cervical portion of the cord, although the posterior were not free from it, here it was limited to the peripheral portion, and a small area at the base of the posterior intermediate sulcus. The anterior pyramids of the medulla oblongata exhibited the same change as the spinal cord.

CONCLUSIONS.

1. The pia-mater presented signs of an old tubercular process which had become latent.

2. The encephalon was the seat of a passive venous engorgement, which had been of long standing. No mechanical obstruction to the venous outflow could be found as the cause of this engorgement, and we must therefore suppose it to have depended on vaso-motor anomalies.

3. The gelatinous exudation of the arachnoid and pia-mater can not be considered an inflammatory product, but rather as a simple filtration of molecular matter and blood discs through the walls of the distended venous channels.

4. The accumulation of lymphoid bodies per diapedesis around the ganglionic cells was, in like manner, the result of the vascular stagnation. The fact that certain cortical areas were more severely affected than others, is to be attributed to peculiarities in the distribution of certain venous channels.

5. This accumulation of lymphoid bodies, of whose identity with blood corpuscles, both red and white, particularly the former, I am fully convinced occurs to such an extent only in one other cerebral condition, namely, that which accompanies the severer forms of typhus fever. The similarity between the pathological appearances of the cerebral cortex in katatonia and typhus is truly striking; the chief difference is that while in the former, certain parts of the cortex are, chiefly, if not exclusively, affected, in the latter the whole encephalon is involved equally. It should not be forgotten that a few of these bodies, one or two in the pericellular space of one out of from twelve to a hundred pyramids, occur in health, but so rarely that they have to be sought for, and are not, as in this pathological condition, so numerous as to actually conceal the nerve-cells from view. In a lesser degree such an increase of the lymphoid bodies takes place in many forms of insanity associated with atrophy; their origin here is however different, as has been explained on another occasion.

6. No destruction or degeneration of the essential nervous elements, the cells and fibres, was to be found, for no importance can be attached to the diffuse pigmentation of a few of the pyramidal cells, as many subjects who have never manifested any symptoms of mental alienation, show the same condition.

7. The condition of the spinal cord and anterior pyramids, is to be considered as a mild grade of sclero-

sis, approximating senile sclerosis in character. In a patient of this age, such a change is unquestionably pathological. I am inclined to consider it as a degeneration due in part to malnutrition, and partly to disuse of the motor tracts, in consequence of the long continued and oft repeated cataleptoid conditions. In this it offers a parallel to Charcot's "sclerose laterale," as found in an old case of hysteric contracture, where the connective tissue hyperplasia, was not the cause of the contracture, but the result of the consequent long continued disuse of the motor periphery. If future autopsies should reveal the same appearances, I should have no hesitation in pronouncing the characteristic pathological conditions to be an inertia of the vaso-motor centers, whose consecutive injurious effects were concentrated on the parts lying at the depth of, and around the fissure of Sylvius. Every other lesion is to be considered as secondary or accidental.

Vaso-motor anomalies, as have been illustrated in some of the cases, do occur in the course of the disease, and are quite prominent features in its clinical history. It is probable, however, that the exudation on the floor of the fourth ventricle exerted an influence in the production of these anomalies.

The symptomatic forms of insanity—mania, melancholia, etc., may be confounded with katatonia, since they all occur in the course of the disease. A differential diagnosis is, however, scarcely necessary here, the result being the same, as regards prognosis, as in the chronic cases.

Insanity of pubescence bears some resemblance to katatonia, but does not partake of the cyclical character of the latter disease, nor is there, unless complicated with epilepsy or chorea, any convulsive element about it. The delusions of the form of insanity occurring at

pubescence are very vague, partaking rather of the character of those found in paresis, more particularly in the mental enfeeblement, the extremely stupid disregard of all conflicting circumstances, and the absence of any explanation; those of katatonia, on the other hand, are rather intellectual, and do not vary so indefinitely.

The katatoniac is consequential, but his dignity is not so obtrusively asserted as is the case in insanity of pubescence; the former likes to be left alone, the latter pushes himself forward. There is more or less simulation in both, as there is with most cases of insanity, but the victim of pubescent insanity grows indignant if detected, the katatoniac considers the detection a good joke.

It would appear at first sight that hysteria resembles katatonia so much, as to defy differential diagnosis. Excepting, however, cases in which there is mutual complication, the two are very distinct. The hysteric takes such care of herself as to avoid injury; the katatoniac frequently exhibits a blind recklessness of consequences. The hysteric requires sympathy for the continuation of her symptoms; the katatoniac would perform rhythmical motions in the darkest corner, and when entirely alone.

The form of nervous disease known as hystero-epilepsy* resembles markedly, in some symptoms, katatonia, but the general history of the disease is very different, and on this alone, rather than isolated symptoms, can a differential diagnosis be founded. Despite the apparent diversity, the delusions of grandeur may raise a suspicion of paresis, but the wide difference of physical symptoms will soon dissipate any doubt on the subject. Chorea complicating insanity may cause the confusion of it and katatonia, but the control of the

* Hammond: "Diseases of the Nervous System."

motions found in the latter disease, and the cyclical phenomena will prevent a long continuance of the confusion. Multiple cerebral sclerosis is a form of disease that in some cases can only be diagnosticated from katononia by the antecedent history, especially when accompanied with paresis.

The prognosis according to Kahlbaum is good; as far as my experience goes bad. Three cases only out of thirty having recovered, and of the permanence of the recovery of two of these I have my doubts. These contrasted opinions are not so contradictory as they seem, for though many, perhaps very many, of Kahlbaum's recoveries were remissions lost sight of, still his patients were in very different circumstances from mine, and were not compelled to re-enter the world during a remission with a damaged brain and endure the struggle for existence, under much the same adverse circumstances that led to their being placed under asylum treatment. The presence of a tubercular meningeal process need not militate against a favorable prognosis. However, taking everything into consideration, the prognosis should be guarded, not only as regards recovery, but as regards life, since katononia *per se* is a disease causing death, and in addition the tendency to phthisis has to be taken into consideration.

The duration of the disease is from two to five years, depending on the hygienic surroundings and treatment of somatic affections. The treatment of katononia is divisible into medicinal and moral. The medicinal treatment should be, in a great measure regulated by the symptoms, and should be of a tonic character, as the katononiac is always more or less debilitated. The motor disturbance points to the use of conium. Alcoholic stimulants have had at times what could be nothing less than a food value, and have aided

in sustaining the diminished vitality of the patient. Stimulant enemata have been occasionally of service, and frequently prevented the return of a cataleptoid condition. The vasomotor anomalies seem to indicate the use of nitrite of amyl. I have tried this remedy, but not sufficiently long to speak decidedly of its beneficial effects, although satisfied that it is of value. Three cases have certainly improved under its use, and it has caused a pleasurable feeling in all cases of *katatonia* where it has been given. One of the cases already cited showed an increased tendency to active exertion and a less theatrical tinge to his words and actions. The case in which an immediate effect was best shown is the following.

CASE V.—E. S., age 26; clerk, American, unmarried, temperate in the use of alcoholic stimulants, no hereditary taint ascertainable, although the father and mother died young. During the year 1874, an enlargement on the patient's neck which seems to have been of the thyroid gland, gradually disappeared, after which an alteration was noticed in his temper which changed from good humor to moroseness; he then became much depressed but soon grew maniacal, passed into a cataleptoid condition, during which he claimed to have an interview with the Deity; he was, on emerging from it, very precise and formal in conversation, and made rhythmical motions with his fingers. These conditions alternated with semi-lucid intervals marked by a morbid religious tendency. Three years after the first appearance of the symptoms, asylum treatment was rendered necessary by his violence. He was admitted March 23d, 1877, to the New York City Asylum for the Insane, was rather blank, but dignified in expression and in poor physical health. He had had, just previous to admission, the delusion that his nerves were all gone,

but when admitted was unable to continue a conversation for three minutes, without passing into a very complete cataleptoid condition. Three days after admission he was placed under amyl nitrite; in the course of an hour he became quite vivacious, danced a jig, insisted on indulging in boxing, talked clearly and connectedly, said that he had been very lazy and disinclined to do anything for his own support. He showed no trace of any delusion, and had no further returns of the cataleptoid condition for two days, when the treatment with amyl was suspended. In the course of the afternoon subsequent to its discontinuance, he had a prolonged cataleptoid relapse, followed by the same phenomena that marked him on admission. Treatment with amyl was again resumed on the following day, since which time he has had no returns of the cataleptoid condition, although he once attempted to feign it, to avoid being bathed. He now has the delusion that he is to live forever, but is clearer in its expression, although somewhat vague as to details. He gives as a reason why he is to live forever, that he is "all nerve." This privilege has been granted by the Deity to him as a special favor. The other cases did not show as immediate improvement, although one who had been in a cataleptoid condition for three months before the administration of amyl, now walks around and talks freely. What the ultimate result will be from this treatment, can not of course be stated, but I hope at the least for a prolongation of the patient's life, and that the correction of vaso-motor irregularities will, if long continued, tend to produce a healthy tone in the circulation, though the effects are, for the time being, temporary in character.

Moral treatment, of course, in a great measure, resolves itself into the consideration of the question of

asylum treatment. This is of advantage, as it affords a means of isolation from friends, always the most disturbing influence in treatment. Change of scene and travel, under charge of a sensible, educated man, not a pedant, would benefit many, as it would enlarge the patient's ideas and stimulate him to a healthy tone of mind—in short, stir him up. If the case be a boy, and he has a doting, foolish mother, removal from her should be the first step in the treatment, as her sympathy would undo all otherwise beneficial measures; a remark that applies with equal if not greater force in the case of a wife and husband.

Balls and musical entertainments of a purely sensuous nature should be avoided, and all things of an intellectually stimulating nature brought as much as possible in contact with the patient. Faradization of the muscles of the chest, as a prophylactic against tubercle, is one means of treating probable somatic complications, to be recommended. The general treatment by tonics, etc., is of course, indicated in this and all other atonic physical conditions occurring during an attack of insanity. The preferable method of artificial feeding, often required in cases of katatonia, is by means of a Davidson's syringe, the use of which is unattended with the danger that accompanies the use of the elastic but stiff tube of a stomach pump, or the misadventures that follow the clumsy funnel method of feeding. From the irregularity of the symptoms, which set at defiance the dicta of the forensic psychologist, it would seem as if the disease could easily be feigned. Apart, however, from the probability of a criminal being so keen an observer as to attempt feigning so complicated an affection, one symptom could scarcely be feigned with even the slightest probability of success, namely, the cataleptoid condition. The failure in the simulation of this symp-

tom, with a close examination of his antecedent history, would soon detect any attempt of this kind. The crimes that a katatoniac would be likely to commit are murder, arson and rape. The murder in obedience to an hallucination, the arson for a similar cause, while the rape would be an expression of his excited erotic condition.

If these crimes, however, were committed during a remission, the patient should be held responsible as he would for the time being, be capable of acting logically on any conclusion arrived at in a logical manner. An instance where a form of disease somewhat similar, and perhaps, were sufficient history on the point obtainable, katatonia itself, has been brought under cognizance of law. This occurred in a fanatical religious organization in Germany. Two ministers of this organization believed they had received, during a cataleptoid condition, a command from God to kill a certain man and raise him from the dead. The former they succeeded in doing, but in the latter they failed. In this case which illustrates the circumstances under which crime might be committed by a katatoniac, the accused were declared irresponsible. Any person, however, who has been acquitted on these grounds should be immediately sequestered for the safety of the public.

Kahlbaum claims that katatonia can occur, and has occurred in epidemic form in France and Sweden. In this opinion he has the support of Bouchut, (*Wien Wochenschrift*, No. 43, 1861,) and Remak, (*Med. Cent. Z. t. g.* No. 87, 1864,) who believe in a nervous contagion causing diseases of the mind. Parallelism is a good thing, but may be carried too far, as it would seem to have been in this case. There is no proof of the existence of any contagion, and so long as these phenomena can be explained in accordance with the

general clinical history of nervous diseases, there is no need of assuming its existence. Influences ordinarily producing insanity in persons predisposed to mental disease, may cause a number of cases to appear at one time, but never to the extent of, or with the uniformity in symptoms characteristic of a so-called epidemic. And this uniformity is the suspicious point in the hypothesis of patho-mental epidemics, but is one that admits of a very rational explanation on other grounds than contagion.

Most probably the greatest number of victims in a so-called katatonia epidemic, were cases of morbid impulse, simulating through a craving for notoriety, a few instances of katatonia that had occurred. It is a curious fact, however, that many of these epidemics, so-called, have occurred in regions subject to scrofulous affections. Mental epidemics have always a half truth in them, and half truths are extremely captivating to a certain class of minds, as a foundation for extravagant theories; but it is needless to say there is no reason to believe that a psychical influence, which resembles in action the contagion of ordinary physical disease, is aught more than a figment of the imagination that serves "to point a moral or adorn a tale" for some enthusiastic alienists of a rhetorical turn of mind.

THE FREQUENT ASSOCIATION OF DISEASE OF THE EAR WITH INSANITY.*

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Physiology and psychology both recognize the influence of the special senses over mental phenomena. Pathology also ascribes to disease and derangement of the special senses, mental perversion and disorders. In view of this it would seem that alienists have not paid that attention to the causes of the disorders of the special senses, and their association with insanity, that the importance of the subject demands. Physiology and psychology attribute to the ganglia of the *sensorium commune*, the function of transmitting to the superior cortical cells of the grey matter, sensations and impressions, which stimulate the ideational cells into functional activity, the various ideational and ideomotor manifestations resulting therefrom. The impressions made upon the sensory ganglia originate from two principal sources—internal or subjective, or external or objective. Both sources of sensations and impressions are subject to derangement and perversion, so that mental phenomena elaborated by the cortical cells, in response to impressions made upon the sensory ganglia, conform, in their normal or abnormal manifestations, to the physiological and pathological status of the sources of sensation. Abnormal subjective sensations are dependent upon a variety of conditions, only a few of which it will be necessary to mention. There

* Read before the Association of Superintendents of American Institutions for the Insane, at the meeting held at St. Louis, Mo., May, 1877.

may be a fatty degeneration of the neurine constituting the ganglionic cells, owing to hereditary or other hidden diseases, that are manifestly innate. Hallucinations of the special senses of infants result from this cause. Again, there may be a combination of several defects, and these may result in a partial or entire arrest of development of the sensory ganglia, causing diminished or complete absence of sensation. Excessive use exhausts the function of the special senses, and the poisonous action of medicinal agents, as also the specific virus of disease, often induce violent perturbations in their action. Any one of the many causes operating to derange the nutrition of the organs, likewise produces hallucinations of the special senses, as may be seen in persons suffering from chlorosis, chorea, or other forms of cachectic conditions, notably *anæmia*, either general and progressive, or immediate from sudden and exhausting hæmorrhage. These hallucinations may be both aural and visual. I have observed marked instances of sensorial hallucinations from loss of blood, during my army experience.

Excessive and sudden determination of blood to the cerebral vessels causes roaring and buzzing in the ear, optical scintillations and visual confusion. Likewise, excitation of the *sensorium commune* of eccentric origin produces the same result. Irritation of the terminal nerves, reflected to the sensory ganglia, frequently gives rise to most violent sensory and motor disturbances. Paralysis of sensibility, convulsions, amaurosis, auditory sounds, vertigo, hallucinations and illusions are frequently the results of irritation originating in centripetal nerves. The most violent sensory motor symptoms have been known to subside in infants, after excising the gums over an advancing tooth. I have seen a child four years old, in a state of wildest delirium, shrieking fear-

fully, and manifesting auditory hallucinations, and shielding her head with her hands and clothing, with a facial expression of abject terror, relieved by the removal of a cherry stone from the auditory canal, which had caused inflammation of the canal and drum. The infliction of injury upon the semi-circular canals of birds, causing vertiginous movements, has its pathological indication in the association of the phenomena now under consideration. The numerous instances recorded in the literature of practical medicine, surgery, and psychiatry render further citation of cases unnecessary. Anticipating a more elaborate report, after more extended observations on the association of aural disease with insanity, I will at the present time merely add to the recital of cases, which have come under my observation, a few practical reflections regarding auditory hallucinations associated with aural disease and insanity. I select the following as typical cases:

Case I.—Miss E. M., age 54; insane two years; no hereditary predisposition apparent, or assigned cause of insanity. Physical condition tolerably good; nutrition somewhat lowered; hearing defective from early youth, the result of inflammation and suppuration of middle ear—a sequela of measles. With advancing age the hearing capacity diminished, and at the present time she can not distinguish the tick of a watch, even in contact with the ear, and the loudest sounds are scarcely audible. She is tormented by aural hallucinations, and is constantly listening to the imploring appeals of a despairing mother, or the piteous wails of a helpless infant, and with profound sympathy in her looks, manner and voice, persistently offers them consolation and assistance. The ears have sustained the destruction of the tympani, loss of the ossicles, and closure of the eustachian tubes.

Case II.—M. G., age 50 years; insane five years; family history not known, hearing defective in both ears, the result of catarrhal otitis media, which may have produced structural changes of internal ear and auditory nerves. He has been the subject of auditory hallucinations during the entire period of his insanity. Every night he stops all the cracks, crevices and key holes, in the windows and doors of his room, to prevent the intrusion of persons, whose evil whisperings disturb his repose.

Case III.—Mrs. S. G., age 43; hereditary history free from insanity. She was a farmer's wife, of previous good constitution and health, the mother of eight children. The only disease preceding insanity was a severe form of nasal catarrh and otitis media, both of which persisted for sometime after admission to the Asylum. She suffered severe pain both from the aural and nasal disorders. She vacillated for weeks, between exhausting delirium and acute mania, first one then the other predominating, with auditory hallucinations of warnings to flee the wrath to come. She improved to complete recovery *pari passu* with the improvement of the aural and nasal disorders.

Case IV.—Miss E. H. age 24; with no hereditary taint, a school teacher, insane thirty days before admission, with acute mania; previous health, good. Shortly after admission, symptoms of prostration and wasting rapidly set in. The cervical and maxillary glands became enlarged, extremities œdematous, with purpuric spots, symptomatic of constitutional infection and disorder of the blood. Suddenly at this stage, there supervened intense pain in the left ear, which resulted, in spite of treatment, in suppuration of the middle ear. Aural hallucinations made their appearance upon the accession of the otitis, and perplexed her both day and

night. She asserted that she heard the roaring of the waves, and the cry of a shipwrecked sailor, and often repeated the well known line, "The boy stood on the burning deck whence all but him had fled;" accompanying this with violent efforts to rescue the ship and crew. The aural and mental disorders are improving; the hallucinations having ceased with the arrest of the otitis. These acute and chronic aural cases indicate the relation between disorders and lesions, and insane auditory hallucinations.

DEDUCTIONS.

In a large proportion of the insane, who have marked and persistent auditory hallucinations, there are pathological changes in the organ of hearing. Sensational and ideational perversion are closely associated with aural hallucinations. Melancholia, and those suffering from nervous depression, and also the homicidal and suicidal insane, are frequently the subjects of aural disease and auditory hallucinations, but with the latter classes, the hallucinations, are generally of a subjective character. The auditory complications occur more frequently in females than in males, in the aged than in the young. Subjects of *tinnitus aurium* frequently manifest some vice of constitution, and generally the aural trouble ante-dates the mental perversion. Subjective sensations are marked symptoms in those who have lost their hearing from inflammatory processes, and generally their hallucinations are of the most mournful, sad and pathetic character. The insane who are subject to auditory sounds suffer from insomnia, loss of appetite, malnutrition, while those who are subject to auditory hallucinations are uncertain in their impulses, irritable, and always dangerous.

A passing reference to one of the common causes of aural disease will not be out of place here.

The disease commonly known as nasal catarrh has, within a few years, either become one of the fashionable diseases, or is really a very common one. To this disease, and to the improper treatment by the various "catarrh remedies" and instruments in general use, an increase of aural disease is attributed by aurists. These specialists are emphatic in condemning all the douches, spray instruments and syringes, now so generally in use in the treatment of this nasal disease. They admonish the profession of the dangers incurred in the use of any instrument that may make the injection of the Eustachean tube possible, and thereby lead to the inflammation of the aural organ.

Prof. Moos, in his history and anatomy of the Eustachean tube, says the tubal os is naturally closed, and necessarily so in tumefaction and inflammatory conditions of the surrounding mucous membranes, and therefore the passage of fluid into the tube is a very difficult operation. I leave the gentlemen of the aural specialty to settle this and the other equally important question, the cause of the prevalence of nasal catarrh, and its relationship to aural disease.

REPORT OF THE PROCEEDINGS OF THE NEW ENGLAND PSYCHOLOGICAL SOCIETY.

The Society, held its quarterly meeting, at Worcester, on the twenty-sixth day of June, the President, Dr. John E. Tyler, in the chair, and Drs. Bancroft, Draper, Jelly, Walker, Fisher, Earle, Godding, Eastman, Brown and Stearns, present.

Upon taking the chair Dr. Tyler read a very interesting paper on melancholia, selecting this topic, because of the great frequency of this form of insanity at the present time. He described in a very graphic manner the course of this disease, pointed out its characteristic symptoms and delusions, and drew the conclusion that the necessary and logical sequence of continued morbid mental depression was suicide, the victims coming to look upon self-destruction as the only possible relief to their miseries. He held that this result was to be expected in every case of melancholia, and that no denial on the part of patient or friends, should be accepted as evidence, that this tendency did not exist; even though the suicidal *impulse* was not present. The suggestion was, and always will be fraught with danger. He instanced several cases in which he had been consulted, where the friends scouted the possibility of the thought of self-destruction, but his warning had induced them to hurry home, only to find suicide accomplished. He gave accounts of several cases of unusual methods of suicide, which indicated very persistent and desperate efforts to accomplish this result, as well as insensibility to suffering.

This paper elicited an interesting discussion, more especially upon the topic whether the suicidal tendency

is the logical and necessary outcome of the phenomena of melancholia, and always present in this form of insanity.

Dr. Earle had not so regarded it, but had considered the suicidal tendency, an accompaniment of only the more severe cases. He recalled a case, however, in which no suicidal tendency having been observed or suspected, during several months residence at the hospital, the patient having been removed for pecuniary reasons, committed suicide within a few days.

Dr. Stearns thought cases of melancholia were seen where no evidence of suicidal tendency was found, and in which he believed none existed.

Dr. Walker agreed with Dr. Tyler, that suicide was the logical sequence of continued morbid depression, and that the suicidal impulse was almost always present at some stage of the disorder, and should be guarded against in all cases of melancholia, although it might be concealed or repressed. He always warned friends of the danger of suicide, in all cases of mental depression. He cited a case in which the patient's physician and her friends repudiated the possibility of her entertaining the thought of self-destruction; but the patient acknowledged it to be the first thought in her mind in the morning, and the last at night.

Dr. Godding has found melancholia a very frequent form of insanity. He had not considered the suicidal tendency a necessary phenomena of the disease, but had believed the simple form liable to change to the suicidal, and had always warned friends accordingly. He thought the greatest safeguard was in holding up and emphasizing the idea of recovery. Acute melancholia, he regarded as less curable than acute mania, but as they passed into the chronic state, melancholia became more curable than mania.

Dr. Fisher remarked that the paper came home very forcibly to those whose practice is outside the hospitals. He referred to the great frequency of suicide at the present time, the daily average in Paris being six, and in Boston it has been very common during the last three years. He believed the suicidal impulse to be an almost constant symptom in melancholia, not the earliest, but not very long delayed. Some cases doubtless recover before the development of this tendency, and in many its existence was unsuspected. It should be assumed to be present in every case. The most serious question in mild forms of melancholia, as seen in general practice was, how to ensure suitable and efficient protection and surveillance, without exciting to activity, by fixing attention upon it, the very tendency it was necessary to circumvent.

Dr. Eastman thought the only way to prevent suicide, when the tendency existed, was by very close watching by competent attendants. He called attention to the very pernicious influence of the wholesale advertising of suicides, and the details of ways and means, as given by the sensational daily press. No doubt hundreds of cases are the yearly result of the familiarity by the masses, with this subject through the newspapers.

Dr. Bancroft remarked, that some of the indications which are confidently relied upon by general practitioners and friends, as showing the absence of suicidal tendencies, are very untrustworthy. He mentioned a case where a person who was very apprehensive and fearful lest she should die, and thereby disarmed suspicion of suicide, took her own life.

At the evening session Dr. Godding read an interesting memoir of a boy sent to the Taunton Hospital a few years ago, who had shot a comrade, and who was

found insane by the court. This case showed such unusual and remarkable peculiarities and contradictions, and gave rise to such perplexities and doubts in its management, that the reading of the paper secured the closest attention. The discussion which followed was of a rather desultory character, consisting mainly of questions and suggestions tending to elucidate the case. The society unanimously requested the publication of the paper, and it will soon be available to the members of the specialty.

The subject for discussion at the next meeting is, "What is the Best System of Supervising Institutions for the Insane, by Authorities superior to the Superintendent." This subject was suggested by the fact, that the Legislature of Massachusetts at its last session, made provision for a commissioner to investigate the whole subject of charitable and correctionable institutions, and to report some comprehensive scheme of management.

Drs. Earle, Stearns and Bancroft were appointed a committee to report at the next meeting, the best method of recording recoveries, so as to enable the public to better understand the facts as to the curability of insanity.

Adjourned to meet at same place, September 11, 1877.

B. D. EASTMAN,

Secretary and Treasurer.

BIBLIOGRAPHICAL.

REPORTS OF AMERICAN ASYLUMS, 1876.

MASSACHUSETTS.—*Fifty-ninth Annual Report of the McLean Asylum for the Insane.* Dr. GEORGE F. JELLY.

There were in the Asylum, at date of last report, 150 patients. Admitted since, 92. Total, 242. Discharged recovered, 18. Improved, 27. Unimproved, 8. Not insane, 1. Died, 20. Total, 74. Remaining under treatment, 168.

NEW YORK.—*Annual Report of the Bloomingdale Asylum:* 1876. Dr. D. TILDEN BROWN.

There were in the Asylum, at date of last report, 191 patients. Admitted since, 98. Total, 289. Discharged recovered, 35. Improved, 33. Unimproved, 26. Died, 21. Total, 115. Remaining under treatment, 186.

OHIO.—*Twenty-second Annual Report of the Dayton Hospital for the Insane:* 1876. Dr. L. R. LANDFEAR.

There were in the Hospital, at date of last report, 600 patients. Admitted since, 261. Total, 861. Discharged recovered, 111. Improved, 31. Unimproved, 50. Transferred, 20. Died, 45. Total, 257. Remaining under treatment, 604.

ILLINOIS.—*Fifteenth Biennial Report of the Illinois Central Hospital for the Insane:* 1875-76. Dr. H. F. CARRIEL.

There were in the Hospital, at date of last report, 474 patients. Admitted since, 521. Total, 995. Dis-

charged recovered, 140. Improved, 229. Unimproved, 88. Eloped, 6. Died, 66. Total, 529. Remaining under treatment, 466.

ILLINOIS.—*Second Biennial Report of the Illinois Southern Hospital for the Insane*: 1875-76. Dr. A. T. BARNES.

There were in the Hospital, at date of last report, 158 patients. Admitted since, 146. Total, 304. Discharged, 44. Died, 19. Total, 63. Remaining under treatment, 241.

ILLINOIS.—*Annual Report of the Cook County Insane Asylum*: 1876. Dr. GEORGE P. CUNNINGHAM.

There were in the Asylum, at date of last report, 271 patients. Admitted since, 237. Total, 508. Discharged recovered, 13. Improved, 47. Unimproved, 5. Transferred, 45. Eloped, 5. Died, 39. Total, 154. Remaining under treatment, 354.

ILLINOIS.—*Sixth Biennial Report of the Illinois Asylum for Feeble Minded Children*: 1876. Dr. C. T. WILBUR.

OHIO.—*Twentieth Annual Report of the Ohio State Asylum for the Education of Idiotic and Imbecile Youth*: 1876. Dr. G. A. DORAN.

TRANSACTIONS OF SOCIETIES, REPORTS AND PAMPHLETS.

What American Zoölogists have done for Evolution. An address by Prof. E. S. MORSE, Vice President of the American Association for the Advancement of Science, at the Annual Meeting, held at Buffalo, N. Y., August, 1876.

This address recounts in detail the labors of individual American scientists in the field of zoölogy. The list of names of those who have advanced important

theories, and made valuable discoveries is large, and contains many well known throughout the scientific world. From this recital we learn that the work performed, in this direction, by the youngest of the nations, entitles America to a high rank, for the spirit of original research exhibited.

Among the best and widest known theories, which had its origin on the Western Continent, we find one which has since become celebrated in the Darwinian philosophy, as that of "natural selection," and even Darwin himself, in the last edition of the "Origin of Species," refers to a paper written by William Charles Wells, of Charleston, S. C., and read before the Royal Society in 1813, as containing the first known recognition of the principle. The theory was originated to account for the black skin of the Negro.

Regarding the theory of evolution the author states that, the earnest opposition of Agassiz checked its too hasty acceptance among American students, but that though thus retarded, by his powerful influence, "his own students, last to yield, have with hardly an exception adopted the general view of derivation, as opposed to special creation." It is an interesting address, and is certainly a gratifying exhibit of the labors of American scientists in the field of zoölogy.

Papers presented to the fifth International Congress of Ophthalmology. By HENRY D. NOYES, M. D. Professor of Ophthalmology and Otology in the Bellevue Hospital Medical College, &c., &c.

The Prophylactic treatment of Placenta Prævia. T. GAILLARD THOMAS, M. D. Professor of Obstetrics and Diseases of Women and Children. College of Physicians and Surgeons, New York. [Reprinted from the *American Practitioner*, May 1877.]

This article is founded upon the clinical experience of Prof. Thomas, than whom no one is more capable of

speaking upon the subject. After reviewing the danger to both mother and child, which arises from this position of the placenta, both before and during delivery; he gives his own practice, and shows its advantages by the citation of cases. He recommends the induction of premature delivery after the period of viability of the child. He shows the success of the method of treatment in cases, in which the diagnosis of a placenta prævia is correctly made. This is of course of primary importance before the operation should be undertaken. Eleven cases are reported as having recovered under his observation, some of which have, however, been previously given. In ten of these the mothers made a good recovery, and in one case the mother died after forty eight hours of septicæmia. In three of them the child was still born, and in another case the child lived seventeen hours after delivery. In the remaining seven the children were born alive and did well. We doubt whether equally good results can be shown by any other method of treatment.

Report on Dermatology. By LUNSFORD P. YANDELL, Jr. M. D. Professor of Therapeutics and Clinical Medicine; University of Louisville. Read before the Kentucky State Medical Society at Louisville, April, 1877. [Reprinted from the *American Practitioner* for June, 1877.]

Transactions of the State Medical Society of Arkansas at its Second Annual Session, held at Hot Springs, Ark., May, 1877.

From the address of the President of the Society we extract the following remarks relating to the establishment of a State Insane Hospital, and to the report made by Dr. P. O. Hooper, a member of the Society.

More than three years ago a board was appointed by our State Legislature, and a small appropriation made, looking ultimately to the establishment of an asylum for the insane. A distinguished

member of this society was commissioned to visit institutions of this kind in other States, and report as to their construction and management. That duty was faithfully and ably performed, and report made in due time, but there the great question lingers. No adequate provision was made by our last Legislature, the work already done has yielded no fruit, and we rather retrograde than advance in this matter. The State's neglect of her duty remains her shame.

Aside from the address the report is occupied with details of business transacted, and the necrological record. There are no papers or discussions reported.

A case of Abdominal Pregnancy treated by Laparotomy. T. GAILLARD THOMAS, M. D., of New York. [Reprinted from Vol. 1, Gynecological Transactions, 1876.]

Dr. Thomas has now diagnosticated seven cases of abdominal pregnancy. Of this number four were operated on, and three were left to nature; four recovered and three died. The operation was successfully performed, and the patient fully recovered in the case reported.

The Discovery of Anæsthesia. J. MARION SIMS, M. D., etc., etc. [Reprinted from the *Virginia Medical Monthly*, May, 1877.]

In this paper Dr. Sims brings forward the claims of another aspirant for the honor of the discovery of anæsthesia. This mooted question is thus again brought into the arena of discussion. Dr. Crawford W. Long is said to have employed ether to induce anæsthesia during a surgical operation, on the 30th of March, 1842, more than four years before the first previously recorded instance by Warren of Boston, in October, 1846. The claim of Dr. Long is evidently fully believed in by Dr. Sims. The accuracy of the statement is sustained by apparently competent authority, and by the publication of the case in the *Southern Medical and Surgical Journal*, December, 1849, which is reproduced in the paper under notice.

The Scientific Basis of Delusion. GEORGE M. BEARD, A. M., M. D. G. P. Putnam's Sons, New York.

A pamphlet of forty-seven pages, is the substance of a paper originally read before the New York Medico-Legal Society, and subsequently published in the *Journal of Nervous and Mental Diseases*, and is designed as an introduction to a work on the Philosophy of Delusion. The aim of the work is said to be to unfold in detail those phenomena of the body and mind, in their mutual relations, that are independent of will or consciousness, or of both, and to give practical suggestions for the reconstruction of the principles of evidence, in their application to history and to logic, to science and to law. From this description of the scope of the proposed work, it would seem impossible to form any approximate judgment either of its character or value. The subject of Trance is treated of in the pages before us, and a new theory of its nature is presented. It is defined as a functional disease of the nervous system, in which the cerebral activity is concentrated in some limited region of the brain, with suspension of the activity of the rest of the brain, and consequent loss of volition. It is asserted this answers the prime requisite of a scientific hypothesis, in that it accounts for all the phenomena embraced in the subject. We can but admire the ingeniousness of the hypothesis, which is certainly broad enough, not only to account for all the phenomena noted, but for all the possibilities of abnormal mental states and action.

Functional disease, so long brought forward as the cause of all mysterious, abnormal, mental, or physical manifestations, is again called upon to bear the responsibility of ignorance and inability to otherwise account for phenomena which are presented for interpretation. As showing the character of this functional disease of

the nervous system, we refer to the author's list of causes of the trance state. They are of two kinds, psychical and physical: "Among the physical causes are injuries of the brain, the exhaustion of protracted disease, of starvation, or of over-exertion, anæsthetics, alcohol and many drugs, and certain cerebral diseases." This would seem to be sufficient refutation of any theory of mere functional disease and leaves no ground for argument. There are a number of interesting illustrations of trance states, but the explanations founded upon such an hypothesis of causation, must necessarily fail to be conclusive. The style is at once pleasant and popular.

Eighth Annual Report of the State Board of Health of Massachusetts: 1876.

This is a report of five hundred pages, and like those of previous years, brings before the authorities and the people of the State much valuable information regarding the principles of sanitary science. These principles are enforced, by detailed reports of the sanitary condition of different cities and towns, and by showing the effect of their observance and neglect upon the health of communities. This work, systematically carried out, as in this and preceding reports, can not fail to be of great benefit, as there is no subject of any thing like the vital importance, the ignorance of which is equally great and general.

The Board have continued their investigations upon "the pollution of streams, and disposal of sewage," and present the result of their labors in a number of recommendations, enlarged and somewhat modified from the seventh annual report. The special investigations of the year are presented in the following papers: 1. On Sewerage, its Advantages, Construction and Mainte-

nance; by E. S. Chesbrough, C. E., of Chicago, in which the connection between good sewerage and good health, though often exaggerated, is shown to be immediate and direct. 2. The Sanitary Condition of Lynn; by J. G. Pinkham, M. D. This is a sanitary survey of the city, and is illustrated by a map showing the houses in which deaths from zymotic disease have occurred during the last ten years. Several individual examples are given of the sources of infection, through the water used for drinking and cooking purposes. The work is well and thoroughly done. 3. The Registration of Deaths and of Diseases; by Charles F. Folsom, M. D., Secretary of the Board. This discloses the imperfect manner in which the registration of deaths is carried out in the State, and recommends the passage of stringent laws upon the subject. The value and importance of the registration of diseases, especially those which are transmissible, and of the plan adopted in Holland and Germany, and in a few cities of the United States, is favorably commented upon. 4. The Growth of Children; by Prof. Henry P. Bowditch, M. D. "This article embodies the results of measurements of the height and weight of about twenty-four thousand school children of the city of Boston. The observations are in part distributed according to the nationality of the parents, and conclusions are drawn as to the comparative rates of growth of the two sexes, and of children of different races." The important conclusion drawn is, that, as the rate of growth varies greatly at the different stages of school life, this fact should receive due weight in the allotment of the studies in school, so that the maximum of mental effort should not be demanded at the time when the vital energies are most taxed for the development of the physique. 5. Diseases of the Mind; by Charles Folsom, M. D., Secretary of the

Board. In this monograph a sketch is given of the progress made in the treatment of the insane from the earliest authenticated period. The historical portions, so far as they relate either to ancient Asia or Europe, either to Greek or Arabic civilization, do not afford much satisfaction to the scientific student. Ancient medicine has little to recommend it outside of the fields of hygiene and gymnastics. Hence, the student who searches through Galen or Hippocrates or Homer, for illustration of the knowledge of insanity possessed at that day will be poorly rewarded. There are two problems which antiquarians have about given up inquiring into, the one as to what disposition was made of the wounded in ancient armies, and what they did with the insane as a class. The few cases reported by Hippocrates are only valuable in so far as they show that he had seen some maniacs, but they are mere curiosities in medical literature, and teach nothing either of therapeutics or political economy. In later times, as Dr. Folsom shows, the Monks, who were the earliest physicians among Christian nations, began to administer to the insane in regular hospitals; but no proper asylum was started until St. Luke's was opened in London in 1751.

In reviewing the historical period in this country, the author of this pamphlet seems hardly to have read the history of the public provision made for the insane in New York, as thoroughly as he has that of Great Britain. It is true that less has been published upon the subject here, than there, and sources of information are not, in consequence, as accessible to the general student, among us, as in England. The various English Lunacy Manuals and Reports of Commissioners, now amounting to many volumes, are repositories of easy accessibility, and we are not surprised that Dr. Folsom should have seen so much more to attract his attention

there, than nearer home. But he who undertakes to write general history is bound to survey at least the entire field, and if he has not acquired enough material to draw an outline of it, he has failed in the most essential of his duties. The omission which strikes us most conspicuously is that of not showing us the actual result of what has been done, as an evidence, not so much of effort, as of successful accomplishment. It is evident that Dr. Folsom, in this respect, has not followed the history of that public interest in the care of the insane which is reflected from the Legislation of this State. The provisions which have for the past fifty years been made by the Legislature for the better care of the insane, the protection of their property, the erection of hospitals, and the securing of a most ample public supervision, will appear, in the estimation of all who study these features, as indicating an ever-present appreciation of the wants of that class of unfortunates.

Every student of the science of government, whether applied to the provisions made for the sick in hospitals, or the insane in asylums, recognizes the fact that the highest expression of progress is always registered in the laws regulating the administration of these public charities. Dr. Folsom does not seem to have kept this in view, or to have furnished himself with these historical data, which, in relation to New York, would have redeemed his paper from an appearance of unfamiliarity with the field of insanity here, which can not well be overlooked. It is not our purpose to go into detail, with reference to showing what has been done in this field in New York. It is sufficient to say that no State in the Union has done as much—that her laws, her asylums, and her supervision of the insane, are fully up to the demands of modern science and humanity; and not to find them at least so much as

catalogued in Dr. Folsom's paper, is to deprive it of that which, as an official monograph, addressed to the Legislature of his own State, makes it only a loose and desultory collection of facts, in directions where there has been already a very liberal enlightenment of the public, and a corresponding omission of facts which form portions of American history that contrast favorably with anything done abroad. Of the special views advanced in the article, regarding the system of non-restraint, separate care of the chronic insane, and the increase of freedom, as presented in the letter concerning the Fife and Kinross Asylum, already rendered famous by its continued repetition, we have, in the past expressed our opinions.

Fourth Biennial Report of the Board of State Commissioners of Public Charities of the State of Illinois: 1876.

The official portion of the report deals largely with the reports of the various charitable institutions of the State. These are commented upon, especially as regards the requests for appropriations from the State Treasury. All of these pass the scrutiny of the Board, and to be successful, must gain their recommendation. These are for ordinary expenses, repairs, additions, alterations and new buildings. There are four appendices made to the report.

Appendix I. "The Centennial History of Charitable Legislation in the State of Illinois." This is a full record of the establishment, and subsequent history of all the charitable institutions for the deaf and dumb, blind, idiotic and insane; these are now nine in number. Appendix II, is upon "The County Jail System;" Appendix III, "The Treatment of Pauperism;" Appendix IV, "Statistical Tables." The report is a neatly printed and bound book of two hundred and seventy-five pages.

SUMMARY.

—Dr. Charles H. Nichols, Superintendent of the Government Hospital for the Insane, has accepted the appointment of Superintendent of the Bloomingdale Asylum, vice Dr. D. Tilden Brown, resigned.

—Dr. W. W. Godding, Superintendent of the Lunatic Hospital at Taunton, Mass., has been appointed to the charge of the Government Hospital at Washington, D. C.

—Dr. Homer L. Bartlett of Flatbush, was on the twenty-third of May, appointed by the Commissioners of Charities, to the Superintendency of the King's County Asylum, in place of Dr. J. A. Blanchard. On the sixth of June the appointment of Dr. Bartlett was rescinded by the Board, and Dr. Blanchard was re-established in his former position. The occasion of such a vacillating course, is said to be a disagreement between the Commissioners of Charities and the Board of Supervisors of the County.

—Dr. Stephen Lett, for many years first Assistant Physician to the London, Ontario, Asylum, has accepted a similar position in the Toronto Asylum, and Dr. Metcalf first Assistant at Toronto, now occupies the position formerly filled by Dr. Lett.

—The honorary degree of LL. D. was conferred upon Dr. Eugene Grissom, Superintendent of the Insane Asylum of North Carolina, by Rutherford College, at its recent commencement, May 24, 1877.

—Prof. A. E. Macdonald the Superintendent of the Ward's Island Asylum of New York City, has recently delivered a course of clinical lectures at the Asylum. They were attended by many members of the profession from the city. Such instruction has the merit of being practical, and is of more value to the active practitioner than any mere didactic lectures upon the subject. Dr. Macdonald deserves credit for his labors in this direction.

—We have been requested to announce that the first Annual Meeting of the American Dermatological Association, will be held at Niagara Falls, on the fourth day of September next.

—The October number of this JOURNAL will contain the usual Report of the Proceedings of the Association of Superintendents of American Institutions for the Insane, held in St. Louis in May last.

AMERICAN
JOURNAL OF INSANITY.
FOR OCTOBER, 1877.

THE FUNCTIONS OF THE GREAT SYMPATHETIC NERVOUS SYSTEM.*

BY R. M. BUCKE, M. D.,

Medical Superintendent of the Asylum for the Insane, London, Ontario.

I propose to submit for your consideration to-day some thoughts upon the functions of the great sympathetic nervous system which have occupied my mind in a more or less coherent form for many years; and if it shall seem to you that certain of the ideas which I shall propound are contrary to received and well-grounded doctrines, and are therefore incorrect, I trust that you will not condemn them hastily, but as liberal men, belonging to a liberal profession, that you will calmly weigh them, and without prejudice adopt or reject them as shall seem to your judgment best.

Although it is necessary that you should have a tolerably clear idea of the structure and distribution of the great sympathetic nervous system, in order to follow me in the remarks which I propose to make, yet I do not intend to do more than to recall briefly to

*Read before the Association of Medical Superintendents of American Institutions for the Insane, held at St. Louis, Mo., May, 1877.

your minds the general outlines of this part of the subject, with which you are all of necessity more or less familiar.

You will recollect that the great sympathetic consists, in the first place, of a double chain of ganglia, over fifty in number, extending from the base of the brain along the sides of the spinal column to the coccyx; in the second place, of certain ganglia, such as the superficial and deep cardiac, the semi-lunar, and innumerable others, named and unnamed, scattered among the thoracic, abdominal, and pelvic viscera; and thirdly, of an almost infinite number of nerve cords, which may be divided into three classes; first, those which connect the sympathetic ganglia one to another, these are not strictly speaking nerve cords, though cord-like in form, but are prolongations of the ganglia, and are made up not of nerve fibres, but of nerve cells; next, those which connect the sympathetic ganglia with the nerve trunks and nerve centres of the cerebro-spinal nervous system; and lastly, those which take their origin in the ganglia of the great sympathetic nervous system, and are distributed to the various organs which are supplied with nerves from this nervous system.

It must not be supposed that this brief *résumé* gives any adequate idea of the extent of the distribution, or the amount of the aggregate mass of the great sympathetic. Probably no part of the body is entirely without sympathetic fibres, and the ganglia of this system are almost as universally distributed as are its nerve cords, so that the whole mass of the great sympathetic, though it can not be determined with anything approaching to accuracy, must be very much greater than is often supposed, and perhaps does not fall much short of the mass of the cerebro-spinal nervous system. Indeed, one author (Davey) goes so far as to say that

it "constitutes a great part of the volume and weight of the whole body."

In minute structure the great sympathetic is composed like the cerebro-spinal nervous system of cells and fibres. Neither its cells nor its fibres, however, are like those belonging to the brain and cord. There is enough difference in minute anatomy to make a thoughtful observer feel certain that there must be a decided difference of functions. The only other thing to be especially remarked about the anatomy of this great nerve, is the immense number and great complexity of its plexuses. These plexuses, speaking generally, are made up of nerve cords from different sympathetic ganglia, of filaments derived from spinal nerves, and often others from cranial nerves. That is, in a given plexus there will unite nerves from perhaps two, three, or more sympathetic ganglia, with filaments from one or more spinal nerves, and perhaps from one or two cranial nerves. From these plexuses the nerve cords proceed to their ultimate distribution, the object of the plexus seeming to be to bring together and combine these various elements in order to form an extremely complex nerve.

Now, as regards the ultimate distribution of the great sympathetic—a matter of great importance to us in deciding upon its functions. In the first place it sends branches to all the spinal and cranial nerves, which presumably follow the course of those nerves, and are distributed with them to the organs supplied with nerves by the cerebro-spinal nervous system. Secondly, it is probably distributed to the coats of all the arteries in the body, though the arteries carrying blood to the head, face, and glandular organs are better supplied by it than others. Thus the common, internal, and external carotids, the phrenic, the renal, the hepatic, the

splenic, the superior mesenteric, sacral, internal iliac, vesical, and uterine arteries are known to be freely supplied by it. Thirdly, the viscera—thoracic, abdominal and pelvic—are all supplied more or less abundantly with sympathetic nerves. I will mention the different organs in their order, according to the amount of the supply, relative to their mass, which they severally receive, as well as I have been able to make it out, but I must warn you that this classification is only approximative—between two such organs, for instance, as the spleen and pancreas, it is impossible to say which is best supplied. You will see as we go on that this classification, although imperfect, is somewhat important, in view of the deductions which we shall be able to draw from it.

At the head of the list, beyond all question, stands the heart; for it not only receives the six cardiac nerves from the upper, middle, and inferior cervical ganglia, and has four plexuses—the two cardiac and two coronary—entirely devoted to its supply; but it has also numerous ganglia imbedded in its substance, which are centres of nerve force for its own use over and above. Next to the heart probably comes the radiating fibres of the iris. Then the supra-renal capsules. In the fourth rank stand, I think, the sexual organs, both male and female, the testes and ovaries being especially well supplied. The organs of special sense come next—the eye, the internal ear, the nasal mucous membrane, and the palate. Next after these organs must be placed the stomach, the whole intestinal tract, and the liver. In the seventh rank stand the thyroid gland, kidneys, spleen, and pancreas. Last of all comes the lungs which receive, in proportion to their size, a remarkably small supply.

There is just one thing more to say about the anatomy of our subject, before proceeding to its physiology,

and that is, to indicate a list of organs supplied by the sympathetic, and not by the cerebro-spinal nervous system. And it is well that you should bear in mind that this division of parts is not absolute, but relative; for, as the sympathetic in all its extent probably has cerebro-spinal fibres mixed with it, so all parts which are supplied with nerves by it, no doubt, do receive some filaments from the cerebro-spinal nervous system; but these fibres are small and few, and are, also, probably modified in their functions by being so intimately associated as they are with sympathetic nerves and ganglia. The division of organs, therefore, into those supplied by both systems, and those supplied by the sympathetic alone, though not an absolute division, is still a real one. In this list we have the radiating fibres of the iris, the arterial coats, the liver, the kidneys, the ovaries, the supra-renal capsules, the pancreas, and the intestinal tract, including both muscular coat and glands, and to this list, I believe, may be fairly added the body of the bladder and that of the uterus.

Now as to the functions of the great sympathetic. Some physiologists, as Todd and Bowman, seem to consider that the sympathetic differs very little in its functions from the cerebro-spinal system, and that, at least in some respects, its functions are identical with the functions of this latter nervous system. There are some general considerations which make this view of the subject appear to me unlikely to be correct. In the first place, though both nervous systems are made up of nerve cells and nerve fibres, yet the cells and fibres of the great sympathetic nervous system differ materially in structure from the cells and fibres of the cerebro-spinal nervous system, and it can scarcely be supposed that such different structures should not be manifested

by some corresponding difference in their functions. In the second place, the great sympathetic system in the arrangement of its parts, in the great number and extraordinary diffusion of its ganglia, and in the immense number and great complexity of its plexuses, is too unlike the cerebro-spinal nervous system for us to suppose that their functions can be anything like identical. Thirdly, the great sympathetic is distributed mainly to organs in the interior of the body that do not require, and are not endowed with sensibility—at all events, to anything like the same degree as obtains in the case of the external organs which are supplied with nerves by the cerebro-spinal nervous system. And lastly, if the great sympathetic has the power of exciting contractility in muscles at all, we shall see that this power is materially different from that possessed by the motor centres of the cerebro-spinal system.

What then are the functions of the sympathetic nervous system?

I shall consider this subject by seeking to give rational answers, deduced from acknowledged facts to the following five questions:

First. Is it a motor nervous system; and if so, in what sense?

Second. Is it endowed with sensation?

Third. Does it control the functions of the secreting glands, as the gastric, mammary, intestinal, salivary, lachrymal, the liver, kidneys and pancreas?

Fourth. Does it influence the general nutrition of the body; and if so, in what manner?

Fifth. Is it the nervous centre of the moral nature, that is, of the emotions?

Let us discuss these questions in their order.

The first question is: Does the sympathetic possess the functions of a motor nerve? The only muscular

structures which receive nerves from the sympathetic, and none from the cerebro-spinal nervous system, are the muscular coats of the arteries, the radiating fibers of the iris, and the muscular coat of the intestines. It would be almost, though not absolutely correct, to include in this list the bladder and uterus. Any nervous stimulation received by these organs, must, therefore, be sent from the great sympathetic, and that these structures are influenced by some nervous system is certain, as we shall see further on. We may, therefore, say positively, that the great sympathetic does act as a nerve of motion. You will notice, however, that all these structures are made up of unstriped muscular fibre; and you will further notice that all unstriped muscle, whether it receives any nerves from the cerebro-spinal nervous system or not, is well supplied by the great sympathetic. We shall be safe if we infer from these facts, that the great sympathetic is the nerve of motion to unstriped muscle. In the case of the heart, whose muscular fibres are striped, though they are not precisely similar to ordinary striped muscle, such as is supplied by the cerebro-spinal system and is under the control of the will, there seems to me no room to doubt that its movements are influenced by the great sympathetic. And this we must take as a partial exception to what I believe to be the law, namely: that the movements of striped muscle are controlled by the cerebro-spinal nervous system, and the movements of unstriped muscle by the great sympathetic. The only other exception to this law that I am aware of is the case of the circular fibres of the iris, which, being unstriped muscle, are supplied by the third cranial nerve.

If we apply the same reasoning to the solution of the question: Is the great sympathetic a sensory nerve?

we do not get a very clear answer. Parts supplied only by the great sympathetic, as the liver, kidneys, pancreas, supra-renal capsules, and ovaries, are probably scarcely if at all sensitive. Arguments as to the sensitiveness of these organs, drawn from their pathological conditions, I do not think of much value, for such pathological states usually involve the investing membrane of these organs, either by congestion of it, stretching of it, or in some other way, and we know that this investing membrane, the peritoneum, is well supplied by cerebro-spinal nerves, and is very sensitive. On the other hand, pathological conditions of these organs which do not interfere with their investing membrane—such as cancer of the liver in cases where all the cancerous nodules are buried in the substance of the organ and do not encroach upon the peritoneum—and many diseases both of the liver and kidneys leading to fatal disintegration of tissue, are quite painless. The organs which I have mentioned as being supplied solely by great sympathetic nerves are by their position well protected, both by being surrounded by sensitive tissues and organs, and by being invested by a highly sensitive membrane. They do not therefore require for their protection that they themselves should be sensitive, and I do not believe that they are so. Another fact which bears out this view remains to be mentioned. When organs analogous to those of which we have been speaking, other glands, as the mammary, salivary, or testes, are placed in exposed situations, they are then supplied with cerebro-spinal nerves as well as with nerves from the sympathetic; the sympathetic fibres being undoubtedly intended to control their functions, and the cerebro-spinal fibres to make them sensitive and so protect them from injury. For if, on the one hand, the great sympathetic fibres were

endowed with sensibility, there would be no occasion for a supply of cerebro-spinal nerves to these organs; or if, on the other hand, the cerebro-spinal nerves are not sent to furnish them with sensibility but to control, as some physiologists maintain, their secreting functions, then there would be no apparent reason why they should be supplied with great sympathetic nerves. All things considered, therefore, I am inclined to answer this question in the negative. I do not believe that the great sympathetic is endowed with sensation. Of course I do not mean that the great sympathetic has not afferent as well as efferent fibres—it doubtless has; but what I argue is that an afferent impulse along these fibres although it may and does awake a response in the corresponding ganglionic, does not awaken sensation.

The third question is: Does the great sympathetic exercise a controlling influence over the functions of the secreting glands? I think there need be no hesitation about answering this question in the affirmative. The ordinary function of these glands might be supposed to be carried on independently of nervous influence altogether, though I do not think it at all likely that it is; for as in the healthy condition of the body the secreting process of every gland is carried on with reference to other parts besides itself, so there seems no means by which the function of a given gland could be so co-ordinated to the condition of other parts of the economy, except through the agency of a nervous system distributed to each, and through which a chain of intelligence—if we may use that word—can be maintained. If any nervous system performs the office here indicated, it must of necessity be the great sympathetic, for the following reasons:—The will has no influence

upon the functions of the secreting glands. In cases of general paralysis from disease or injury of the cord, the functions of the secreting glands are performed almost, if not quite as well as when the cerebro-spinal system is intact. The great sympathetic is the only nervous system which is distributed to all the glands, the liver and kidneys receiving nerves from no other.

As for the cases of extraordinary action, or want of action, of these glands, in some emotional states, as, for example, the excessive secretions of urine in fear, of tears in grief, and conversely the arrest of the buccal and salivary secretions in terror, the arrest of the gastric secretion from almost any marked emotional excitement, the well known increase, arrest, and alteration in quality of the mammary secretion from the influence of maternal love, terror, and rage; these can not be explained without referring them to the influence of some nervous system over the glands in question. I think, for the following reasons, that this nervous system is the sympathetic. In the first place, some of these glands, as the kidneys, receive no other than sympathetic nerves; and in the second place, the great sympathetic sends a liberal supply of nerves to all of them. It does not send nerves to those glands which are not supplied by the cerebro-spinal system, and very few, or none, to such glands as are supplied by it. On the contrary, if you will recall an attempted classification on a previous page of this essay, you will see that there the kidneys, which receive no nerves but from the great sympathetic, rank in the seventh order of organs, according to the quantity of sympathetic nerves which they receive. The testes, ovaries, the gastric and intestinal glands all come before the kidneys, as all receiving more sympathetic nerves than do these. Of these organs the ovaries, supra-renal capsules and liver receive no cerebro-

spinal nerves, but the other organs all do, and some of them, as the testes and gastric glands, receive a tolerably large supply of nerves from this system. If, then, some secreting organs are certainly influenced by emotional states, through the medium of the sympathetic, and if the great sympathetic is supplied just as copiously, or more so, to other organs whose functions are also influenced by emotional states, is it not reasonable to conclude that the medium is the same in all cases, and that it is through the great sympathetic that emotional conditions effect the secretions?

But this is not all. We have seen above that it is a strict rule that secreting glands are supplied with cerebro-spinal nerves copiously, or the reverse, according to the degree of their exposure to injury from without; thus the salivary and mammary glands are well supplied, while the kidneys and liver receive no cerebro-spinal fibres at all. So, too, the testes are supplied with cerebro-spinal nerves, while the homologous organs in the female—the ovaries—are not. So that, on the one hand, without supposing that the cerebro-spinal nerves going to these organs have anything to do with their functions, we can understand why they are sent there; and, on the other hand, we have shown that they are not needed to explain the functional phenomena of these organs, for these are the same in glands which are, and in those which are not, supplied with cerebro-spinal fibres.

But there is still another word to say in support of this view, and it is this—cerebro-spinal nerves are either nerves of sensation or nerves of motion. Now in the case, for instance, of the mammary glands, which are supplied with cerebro-spinal nerves derived from the anterior and lateral cutaneous nerves of the thorax, those branches which are distributed to the mammary

glands are either sensory or motor nerves. Now if we suppose that these nerves control the secreting functions of the glands, we must either suppose that a motor nerve is able to take on this function, which does not seem likely, or we must suppose that it is accomplished by a sensory nerve, and in that case we must argue that the nerves in question are capable of carrying the current which has this influence on the gland the reverse way to its ordinary use, for the current in a sensory nerve flows from the periphery to the centre, but this current of nervous influence, of which there is now question, flows along the nerve from the centre to the periphery. If you will carefully weigh these considerations I think you will have no difficulty in agreeing to the following propositions:—That the great sympathetic can and does exercise a controlling influence over the secretion of glands, such as the kidneys, which receive no other nerves. That, as it is at least equally distributed to other glands which receive cerebro-spinal nerves, and no other function appears for it to perform, it influences their secreting functions also. That cerebro-spinal nerves, when sent to glands, have another obvious function to perform besides that of controlling the secretions of these glands; and that it is consequently unnecessary to suppose that they do this likewise. And, finally, it does not seem likely, for other reasons, that the nerves derived from the cerebro-spinal system can or do influence the functions of secreting organs.

The fourth question is: Does the great sympathetic influence the general nutrition of the body; and if so, in what manner? The nervous power which controls nutrition must be universal since nutrition itself is universal. The great sympathetic nerve is distributed to the

whole system, while many parts are not supplied by the cerebro-spinal system. For all cranial and spinal nerves receive branches from the sympathetic which are undoubtedly distributed, at least in part, with the spinal and cranial nerves. Also all arteries are accompanied by sympathetic nerves, which are distributed to the same parts as the arteries. Besides this there are, without any doubt, as pointed out by Davey in his *Work on the great sympathetic*, hundreds of minute sympathetic ganglia scattered among the tissues and organs of the body which send filaments to the parts in the neighborhood of each of them, so that in fact the distribution of the great sympathetic nerve is probably absolutely universal, while the distribution of the cerebro-spinal system is far from being so.

The nutrition of paralyzed limbs, though not up to par on account of want of exercise, is still pretty well kept up; while if those limbs could be deprived of sympathetic nervous influence instead of cerebro-spinal nervous influence, we have reason to believe that their nutrition would fail absolutely, and that they would die.

If the sympathetic be divided on one side of the neck, the immediate effects of the operation are as follows: the corresponding side of the head and face is immediately very much congested, and the temperature of the same parts raises several degrees, (8° to 9°). The meaning of these changes would seem to be that the muscular coats of the arteries are paralyzed by division of the nerve which supplies them, and that oxidation of the tissues takes place too rapidly. Whether oxidation of the tissues is hastened in consequence of the congestion which is due to the paralysis of the muscular coats of the arteries, or whether it is due to a direct loss of nervous energy supplied by the sympathetic to the tis-

sues themselves, and by virtue of which retrograde metamorphosis is in the normal state of the parts held in check, or what part of the extra oxidation and consequent extra elevation of temperature is due to each of these causes, can not perhaps, be absolutely determined in the present state of our knowledge. It is in any case undoubtedly true, that either directly or indirectly the great sympathetic exercises a controlling influence over that process of cell growth and destruction which we call nutrition. To what extent the process of nutrition is dependent upon a supply of nerve force derived from the sympathetic is a more difficult matter to decide. We know that this process goes on in plants, and in animals too low in the scale to have a sympathetic system, though Davey believes that all animals have a sympathetic system, and that even plants have an analogous organ; but supposing that the ordinary view is correct, and that neither plants, nor animals very low in the scale, have a sympathetic system, then it would seem that the process of nutrition cannot be entirely dependent upon any kind of nervous influence. But in that case, it would appear that, while going on under the general laws of chemico-vital selection, and of cell growth and destruction, which are common to all organized beings, the highest as well as the lowest, to plants as well as to animals, nutrition is still subject to what we may call a general supervision of the great sympathetic system.

The last question which we have to answer in regard to the functions of the great sympathetic, is: Is it the nervous centre of the moral nature? I believe it is. And first it will be necessary to define the meaning here attached to the expression, "Moral Nature." You will understand, of course, that I mean by it something

quite distinct from the intellect which, along with it, makes up the whole mind of man. Now we all know that the manifestations of these two, the intellectual and moral natures, commonly occur together. That is to say, the idea of a thing or person having arisen in the mind, a feeling of pity, tenderness, love, fear, hate, annoyance, or a feeling of some kind, arises at or about the same time, and is directly towards the same thing or person; and to all appearance the idea and the feeling arise together, and are simply two aspects of one mental act. Now, what I argue is, that this is not the correct view to take of the matter at all; but that either the idea at first arises and then the feeling which may be said to color it; or that the feeling having arisen primarily, it either suggests the idea by association and then colors it, or the idea being suggested by something else besides the feeling it is, all the same, colored by it to a greater or less degree.

The intellectual nature includes every kind and degree of thought, from the simple presentation of the image of a natural object to the mind to the most abstruse reasoning—it includes, among its divisions, perception, conception, memory, imagination, reasoning, comparison, abstraction, and judgment.

The moral nature, on the other hand, includes every form of passion and emotion, and some feelings that are not classed as passions or emotions, such as faith, courage and confidence. As an incomplete catalogue of the divisions of the moral nature, including some compound states partly ideational and partly emotional, I may mention,—and I purposely place the antithetic emotions in juxtaposition—love, hate; courage or faith, fear. And here I wish to say that after long consideration upon this point, and a careful and lengthened series of observations upon my

own mental operations, I am inclined to think, though I do not pretend to state it positively, that these four are the only simple emotional states; at all events, the only simple states that are included in the list here given. That these four are themselves simple emotional states I think is certain. The rest are compounds of one or more emotional with one or more ideational movements. Well, then, the list contains, simple emotions—love, hate; faith, fear. Then compound emotions—anxiety, security; trust, suspicion; joy, grief; high spirits, low spirits; exultation, dejection; triumph, despair; tenderness, surliness; patience, impatience; confidence, shame. Now, it must be borne in mind, that these moral states have all of them a wide range in degree. That, for instance, there is no difference in kind between a casual liking and the most intense love—between a slight feeling of dislike and the bitterest hate—between the faith that makes us take the word of an acquaintance for a few dollars and the faith which enables the martyr to walk exultingly to the stake—between the feeling of uneasiness that something may be wrong and the agony of extreme terror; and so through them all.

Without taking up too much of your time with the psychological side of this argument, I may say here that, given a certain number of ideational elements (simple concepts) and a certain number of moral elements (simple emotions), then the mind seems to be built up of these in accordance with certain laws which may be called the laws of their association. The first law is that the union of ideational elements (simple concepts) is more elementary and stronger than the union of ideational elements and moral elements, and that the union of ideational elements can be carried to any extent of which our minds are capable just as well without as with the presence of emotional states. The

second law is that one emotional element does not unite with another emotional element without the existence of an idea. That in other words, although a simple emotion may and sometimes does exist in the mind, unassociated with any idea, a compound emotion cannot so exist. The third law is found in chemistry as well as in psychology. It is, that binary combinations of concepts are more stable than tertiary combinations, and these than more complex combinations of concepts; and that binary combinations of a concept and a simple emotional state are more stable than tertiary combinations of these elements, and these than still more complex combinations.

If the brain is the organ of the intellect, and the sympathetic of the emotions, it seems to me that the greater complexity of structure of the first as compared with the last will throw some light on laws one and two, and also upon another very significant circumstance of the same kind, namely—that while we have an elaborate ideational memory we have no analogous register for the moral nature.

The complexity and fineness of the adhesions between ideas constitute largely the value of a given intellect. The union of ideas with emotional states makes up character. Our feeling towards individuals of our race as well those related to us or known to us as those whom we casually meet, our feeling to the race at large, to external nature, to the unknowable which surrounds us on all sides, to ourselves, to death, and, in fact, the strength of adhesions or want of adhesion between all ideas and all emotions is what we call character, in its infinite variety. With some people these bonds are exceptionally loose, and we say they are unstable, or we say such an one is weak or has a weak character; with another the bond is exceptionally firm, and we

say that such a person is obstinate, or that such an one possesses great firmness of character.

In the development of a race the formation of these bonds, almost infinite in number, and requiring to have a definite relative strength within certain limits of variation, is of at least as great importance as the actual development of either the emotional or intellectual natures. And derangement of these associations, the loosening of some, which are essential to life in a social state, and the formation, *de novo*, or the increased intimacy of union of others which are trivial, valueless, mischievous—I say such derangements of associations between moral states and intellectual concepts, and, going deeper, derangements of the union of intellectual concepts with one another, constitute the characteristic mental lesion in many cases of insanity, and such derangement probably constitutes a material part of all insanity.

Now the intellectual and moral natures being, for the sake of the argument, defined as above, I contend that they are functions of two different organs, or of two different parts of the same organ, for the following reasons:—A continuous current of ideational states and a continuous current of emotional states constantly exist and flow on together without interfering with one another, except through the association of certain ideas with certain emotional states. Any idea may exist associated with almost any emotional state. There is no fixedness of relation between ideas and emotional states, such as there would be if they were the concurrent functions of one organ. Any idea may exist without the co-existence of any emotional state. Any simple emotional state—fear, anger, love, or faith—may exist without being associated with any idea; that is, without the simultaneous existence of any thought. More-

over there is no relation between the intensity of emotional and intellectual action going on at the same time, as we should think must necessarily be the case if these two were functions of one organ; for during states of strong emotional excitement the intellect may be very active or the reverse, and during periods of intense intellectual activity there may be either a great deal of emotional excitement or very little. Another reason is that there is an absence of relation of development between the intellectual and moral natures which could hardly exist were these two functions of one organ—for in any given individual the intellect may be highly developed and the moral nature very ill-developed, or the reverse; so that we often see clever men with bad hearts, and men of excellent moral qualities who are very stupid. We all know instances of these two classes of men as well in actual life as in history. And passing from ordinary life downwards to that life which is below the ordinary level of humanity, the lower level upon which the individual stands may be due to deficiency of the intellectual or of the moral nature. For if the intellect is below the ordinary standard of humanity, we say the man is a fool; if still further deficient we say he is an idiot. But if it is the moral nature which is deficient in development, we say the man is a criminal either in act or at least by nature; and if the moral nature is still further deficient, we say the man is a moral idiot. But the fool may have a kind and affectionate heart, and the criminal a quick wit. The intellectual idiot may still have the fundamental affections of our race fairly developed; and the moral idiot, though his intellect is not likely to be of a high order, may be a long way from a fool. It is undoubtedly true that there is a certain relation between intellectual and moral defect, so that they are apt to

co-exist, but this tendency is not greater than is the tendency between allied organs, such for instance, as the cerebro-spinal nervous system and the great sympathetic, to be both well or ill-developed in a given organism. The intellectual and the moral natures being for these reasons presumably functions of different parts of the nervous system, or of different nervous systems, let us see if it be possible to determine what part of the nervous system the moral nature is a function of.

There are some general considerations which are calculated to raise a presumption in an unbiased mind that there may be a closer connection than is usually supposed between the great sympathetic and the emotional nature.

In the first place, as pointed out by Benjamin Richardson in his latest work, "On Diseases of Modern Life," we feel that our emotions have their seat not in our heads, but in our bodies; and the languages of all nations and of all times refer the emotions to the heart, in and about which organ are grouped the larger ganglionic masses of the great sympathetic system.

In the second place, the intellect is less developed and the moral nature more developed in woman than in man, and we know that the brain is smaller, and we have reason to think that the great sympathetic is larger, in the female than in the male sex of our species. I do not think a comparison has ever been made by direct observation between the great sympathetic in man, and the same organ in woman, but it has two large organs to supply in the female which do not exist in the male, viz.: the mammary glands and the uterus. It is certain, therefore, that the organ is larger in the female, by that much at least.

In the third place, there is the fact that all the functions which we know of as belonging without question

to the great sympathetic are what we may call by comparison with the functions of the cerebro-spinal nervous system, continuous functions for example:—the control of the calibre of the arterial walls, the slow and almost constant peristaltic action of the bowels, the regulation of secretion and nutrition;—while all the functions of the cerebro-spinal nervous system might be called by contrast, instantaneous functions—the reception of sense impressions, the act of thought, the contraction of a voluntary muscle or of a group of voluntary muscles—these functions are scarcely begun before they are ended. Now, it is easy to see into which of these groups emotions naturally fall. We do not love for an instant, as we think of an algebraic equation or of a point in diagnosis, and then cease for a time or altogether to love; on the contrary, we love for months, years, a lifetime. So with hate. Though we do not hate, most of us, fortunately, quite as persistently as we love, still we seldom hate for a few hours, or even days only, and we are apt to keep it up even weeks, perhaps months. Faith I consider to be with love the highest function of the moral nature. I do not mean anything like belief when I say faith; belief belongs to the intellect—is a part of the intellectual nature. The moral function faith is something that includes reliance, confidence and courage, and when it is possessed in large measure, and carried into matters of religion, the person possessing it is safe from at least half the ills of mortality. Without encroaching upon the domain of the theologian, we may say in a true sense that such a man is saved. This faith, like love, and still more than love, is constant for months, years, or a lifetime. Look now at the more momentary passions, such as anger or fear. We know that to become angry takes an appreciable length of time, some minutes, or even hours, according to the degree of mo-

bility of the individual nervous system acted upon, and according to the nature of the exciting cause of the anger, and that when the passion is fully aroused it continues for some time, sometimes for days, and then passes off slowly as it arises. The same may be said of fear. It is well known that after a great danger has been passed fear will often last for days or even weeks, and fear is never momentary.

A fourth consideration, which argues a connection between the moral nature and the great sympathetic nervous system, is what we may call the depth of both the one and the other. The great sympathetic is anatomically deep; it is buried out of sight; it does not come to the surface at any point; it has no direct connection as far as we know with the outside world. You know that in this respect it is in strong contrast with the cerebro-spinal nervous system, to which belong all the nerves of general and special sense, and which supplies all the muscles whose movements are visible on the surface, as well as the vocal organ. The great sympathetic has no such connections with the outside world at all; no sense organs, and no voluntary muscles belong to it; it has no vocal organ. Now how does the great sympathetic compare in these respects with the moral nature? I say it tallies exactly with this latter. For if you will consider a moment you will see that we can neither receive nor transmit moral impressions directly as we can thoughts. We can only receive moral impressions by their spontaneous growth within us, as most often in the case of love or faith; or if we acquire them in a more casual manner we get them through intellectual changes—for example: we see and realize a danger, and we have fear; we perceive an insult, and we become angry. The intellectual movement must precede the emotional movement.

The emotional life is under the intellectual life; as I said at first, it is deeper. Now, as with receiving, so with transmitting or expressing emotional states. I can tell you that I am afraid, or that I love. This, however, would not be an expression of emotion. This would be only an issue of intellectual paper intended to represent emotional gold, which last never leaves the vault of the bank. It is true, to a very large extent, that we can not express our emotions. We all feel and know this in every day life. I said just now that the great sympathetic has no vocal organ. So, too, the moral nature was born dumb. If we do attempt to express an emotional state we take round about or special ways to do it. For example: if I was very angry and wished to show it, or perhaps was compelled by my passion to show it without wishing it, I should do so by speaking in a loud voice, in a peculiar tone, by gesticulations and by facial expressions; and even then, with all this fuss, I should not express my moral state as clearly and fully as I could express any given intellectual state by means of a few calm words

In further considering this part of our subject, we have to look at the problem from two sides, the converse of each other. First, we have to consider the different ways emotions are caused or excited, and see whether these causes are such as act upon the cerebro-spinal nervous system, or upon the great sympathetic. Then, secondly, an emotion being excited, we have to consider the effect of this emotion on the economy, and see whether those organs supplied by the sympathetic are primarily affected, and most affected by the nervous disturbance, which is the physical accompaniment of the emotion, or whether those organs supplied by the cerebro-spinal nervous system are those which are first and most affected.

We have, then, to consider, in the first place, emotional excitants, and to try to determine from their seat and nature, which nervous system it is that they act upon in giving rise to an emotional state. Now, emotions originate in three ways: first, spontaneously—that is, from some condition of the body or part of the body; secondly, they are excited by thoughts through associations formed in the past, either of the individual or of the race; thirdly, they are excited by impressions received through the senses without the intervention of thought.

A complete list of the instances in which emotions arise spontaneously, or from some condition of the body or part of the body, would be much too long to be recited here. I will first mention one or two physiological conditions, and then proceed to the pathological. And let us first notice the relation which exists between age and the activity of the moral nature in general. In childhood and youth you know that there is a constant and rapid succession of emotional states. A healthy, active child is either in a state of joy or grief nearly all the time while awake. Boys and girls are almost constantly either playing, quarreling, or sulking; that is, there is some active emotional condition present nearly all the time. Young men and women—that is, very young men and women—are almost equally liable to the constant domination of one emotional state after another. That is the age of impulse and passion—it is the age of bad poetry in the male, and of hysteria in the female. You know that this law is as well exemplified in the lower animals as it is in man—that lambs, kittens, puppies, and probably the young of all animals, are much more emotional than adults of the same species. But from childhood to maturity is not the age during which the higher

centres of the cerebro-spinal nervous system are especially active. These children who are so fond of play and so apt to sulk, and these poetical young men and hysterical young women, are not particularly either thoughtful or studious. There is, in fact, no reason to suppose that there is during this period any extraordinary activity of any of the higher cerebral centres. I say advisedly "higher cerebral centres," because we know that in youth the sensory motor tract of the cerebro-spinal nervous system is more active than it is later in life. But we also know that there is a most elaborate and intimate connection between this sensory motor tract and the great sympathetic; and we know too, that the actions of childhood and youth are prompted more by emotional impulse than by reflection; so that the great activity of the sensory motor tract of the cerebro-spinal nervous system during this period of life does not necessarily tell against my argument.

It is a fact, then, that in youth the moral nature is markedly more active than it is later in life, and it is a fact that the intellectual nature is not markedly more—that it is even less—active in youth than at maturity. And furthermore, it is a fact that the great sympathetic nervous system is very much more active in childhood and youth than it is afterwards, as shown by its universally acknowledged functions—for instance, by the greater activity of the circulation, by the greater activity of all the secretions, by the greater activity of digestion, assimilation and nutrition.

If then we join, as it seems to me that we must join, the excess of function to the more active organ, the inference is plain—it is, that the moral nature is a function of the great sympathetic.

The next most prominent physiological condition which gives rise to an emotional state is undoubtedly

that which underlies the development of sexual passion. The essential part of this condition is certainly an active and healthy state of the testes or ovaries; for if all the other conditions be present, and this organ alone be either absent, or materially injured by disease, or immature, or atrophied, or if it be functionally inert from any other cause, this particular emotional state can not be produced; while the absence or disease of no other organ will operate as a positive bar to its existence. The presence in the mind of the image of a person of the opposite sex, although to the unthinking it seems to be the chief factor in the production of this emotional state, has in reality nothing at all to do with it in any fundamental sense, for this emotion may exist without any such image being present, and being fully aroused it may with many people be readily transferred from one mental image to another, whereas if it were dependent upon the image this could not happen. It is in this way that we may account for those cases, frequently seen, in which a man, upon a very short acquaintance, marries a second woman upon the breaking off of an engagement with a first. Again, in the higher animals—in whom we must admit a mental structure in sexual matters, almost, if not quite, identical with our own—though some of them will not transfer their affections from one object to another, or will do so only with great difficulty, and after a certain period of mourning, yet in others there seems little or no cohesion between the mental image and the emotional state, so that the sexual glands being active, and the emotional condition in question being present, the individual upon whom the sexual favors may be bestowed is a matter apparently of entire indifference. These considerations seem to me conclusive against the theory that this emotional condition is dependent upon the mental

image, and the reasons above given seem also to establish the position that the state of the sexual secreting glands is the real determining cause of the emotion. This being the case, we have next to ask with which nervous system these glands are most intimately connected? You know what the answer to this question is. The ovaries receive no nerves but from the sympathetic, and the testes, as pointed out above, receive nerves from the cerebro-spinal nervous system only because they are exposed, and required to be endowed with sensibility for their protection. But if the sympathetic nerves be the connecting link between the organ whose condition excites the emotion, and the nerve centre in which that emotion arises, that nervous centre must be the sympathetic ganglia.

The pathological conditions which give rise to active emotional states are extremely numerous, and I wish particularly in this connection to draw your attention to the fact that it is invariably in lesions of organs well supplied by the sympathetic that these perversions of the emotional nature occur. As a rule, in diseases of the brain, spinal cord, and muscular system, there is little or no derangement of the moral nature; on the other hand, in diseases of the stomach, heart, liver, kidneys, supra-renal glands, and of the testes, ovaries and uterus there is always some, and often great, disturbance of the emotions. In cancer of the stomach, ulceration of the stomach, and chronic gastritis, there is a good deal of emotional disturbance. You have no doubt all seen cases of dyspepsia in which constant low spirits, and occasional attacks of terror, rendered the patient's condition pitiable in the extreme. I have observed these cases often, and have watched them closely, and I have never seen greater suffering of

any kind than I have witnessed during these attacks. Now, how do we know that these pathological conditions of the stomach produce terror and low spirits by impressions conveyed through sympathetic nerves to sympathetic ganglia, and not by impressions conveyed through the pneumogastrics to the brain? We infer it because all the accompanying morbid phenomena are certainly due to disturbance of the sympathetic. Thus, a man is suffering from what we call nervous dyspepsia. Some day, we will suppose in the middle of the afternoon, without any warning or visible cause, one of these attacks of terror comes on. The first thing the man feels is great but vague discomfort. Then he notices that his heart is beating much too violently. At the same time shocks or flashes as of electrical discharges so violent as to be almost painful, and accompanied by a feeling of extreme distress, pass one after another through his body and limbs. Then in a few minutes he falls into a condition of the most intense fear. He is not afraid of anything; he is simply afraid. His mind is perfectly clear. He looks for a cause for his wretched condition, but sees none. Presently his terror is such that he trembles violently, and utters low moans; his body is damp with perspiration; his mouth is perfectly dry; and at this stage there are no tears in his eyes, though his suffering is intense. When the climax of the attack is reached and passed, there is a copious flow of tears, or else a mental condition in which the person weeps upon the least provocation. At this stage a large quantity of pale urine is passed. Then the heart's action becomes again normal, and the attack passes off. There is nothing imaginary about this description. It is taken word for word from the account given to the present writer by the actual sufferer, who is himself a highly intellectual medical man.

Neither is the description a summary of a number of attacks, but it refers to one particular attack, which was witnessed by the writer, and I am satisfied is absolutely accurate.

Now, what I wish to call your attention to is, that all disturbance of function accompanying one of these attacks is disturbance of function presided over by the sympathetic. We have seen above that the secretions are controlled by this nervous system, and I have mentioned how the salivary, lachrymal, urinary and cutaneous secretions are altered, both by diminution and increase, in these attacks. The heart's action is almost certainly under the control of the sympathetic, and it is greatly disturbed. The trembling, as more fully explained further on, is probably the phenomenon produced when voluntary muscles are acted upon, and thrown into action by the sympathetic nervous system. On the other hand, we have no indication that during the attack described, the cerebro-spinal nervous system is in any way excited or disturbed. The mind is clear; the reasoning and perceptive faculties alike in perfect order; the control of the will over the voluntary muscles through the medium of this nervous system is in no way interfered with; and in fact so little is the centre of ideation involved, that, as I have stated, no mental image is associated with the emotion of terror—the man suffers simply from fear, not from fear of something.

It seems then clear to me that the great sympathetic is the nervous system acted upon by the abnormal condition of the stomach, which nervous system in its turn reacts upon the economy, and consequently that the terror in question is one of its functions. The lungs receive a very small supply of sympathetic nerves, and we know that long continued disease of their tissue end-

ing in destruction of large parts of this tissue, and at last in death, will often scarcely give rise to low spirits, never to extreme depression, or to violent emotion of any kind. The heart receives a very large supply of sympathetic nerves, and its diseases, as fatty degeneration of its substance, and calcareous degeneration of its arteries, are accompanied by very great depression of spirits, and often by agonies of anxiety and terror.

The common forms of so called heart disease—that is, imperfections of the cardiac valves, and contractions of the cardiac orifices—are not, in the sense in which I am now speaking, disease at all; for there is in these cases no tissue change—there is simply a change in mechanical conditions. The liver is moderately well supplied with sympathetic nerves, and there is a moderate amount of disturbance of the moral nature in cases of disease of its tissue, as in cancer, and impairment of its function, as in congestion; but as disease of the liver, either structural or functural, seldom or never occurs without structural disease, or at least functural derangement, of the stomach accompanying it, it is difficult to estimate the amount of the disturbance of the emotions caused by the hepatic conditions themselves. Emotional conditions excited by diseases of the kidneys are undoubtedly due in great part to the destructive changes going on in these organs, but they are also to a certain extent due to the uræmic poisoning which necessarily accompanies them, and so the effect of the blood change and of the organic change mask one another.

But the pathological condition most clearly in favor of my argument is beyond question Addison's disease of the supra-renal glands. You know that the number and size of sympathetic nerves sent to these small bodies is extraordinarily great. You also know that they receive no cerebro-spinal nerves at all. Any of

you who have ever seen cases of this disease are equally aware of the extraordinary effect produced by disease of these bodies upon the moral nature. Long before the patient is obliged by the degree of his illness to abandon his usual occupations he is greatly troubled with listlessness, langour, and low spirits, and as the disease advances these symptoms increase, and attacks of terror and extreme low spirits are common. Now, to return to our old argument. The morbid action is in the suprarenal gland. The nerves which convey the impressions which excite emotional disturbance are necessarily here sympathetic nerves. The nerve centre in which the emotional disturbance takes place is therefore one or more sympathetic ganglia. Therefore the sympathetic ganglia are the nervous centres of emotional states.

We have next to consider the excitation of emotions by thoughts from associations formed between them in the past of the individual or of the species. And here I may say that this clause must be purely psychological. Nothing which can be said under this head has any relation to any organ which may be specially related to the moral nature. It is only intended here to point out certain relations which emotions and thoughts bear to one another.

I shall confine my remarks upon this part of our subject to a short review of two prominent associations of this kind which exist not only throughout the whole human family, but which have a foremost place in the psychical life of all sentient creatures—namely, the Fear of Death and Maternal Love.

No one will deny that a strong bond of association exists between the emotion fear, and the thought of self death; for the thought of death apart from self death is not by any means so intimately connected with this

emotion. And when we actually lose by death those whom we most love, we grieve for our loss, not because a great misfortune has befallen them.

The intimate association between this emotion and this mental image is shown by the fact that if the emotion fear be primarily excited, as in such pathological conditions as those referred to above, the almost inevitable consequence is that the thought of self death arises at once in the mind, though the bodily health may be at the time tolerably good, and the person as unlikely to die then as at any other period of his or her life. On the other hand in a state of health let self death appear to the reason to be imminent, and with most people the emotion fear is felt in a lively manner within a very short time thereafter. Now why is this? Why does the emotion fear excite the idea of death, and why does the idea of death excite the emotion fear? It is not because we know death to be an evil, for we know nothing about it; and even if we knew it to be, past all doubt, a very great evil, that would not explain such an association as exists. For other things which we have every reason to believe to be the greatest evils, such as sin, poverty and disease have not—that is, the thought of them has not—the same intimate relation with the emotion fear. Neither is it because we fear the pain which often accompanies death, for if we had every reason to be sure that the death would be painless the fear would equally exist. Besides, when men actually come to die, either by some disease which leaves the mind intact, or by an execution, they have little or no fear. As soon as death is certain, inevitable, close, the Dweller on the Threshold departs and leaves the door between the known and the unknown open and the passage unobstructed.

The fact is that the association between fear and the thought of self death has no basis, so far as we know or

have reason to think, in the truth of things, but is purely artificial, and is, beyond question, the result of natural selection operating upon countless generations. For, given a race, either of men or of inferior animals in whom this association did not exist, and the life of that race, in such a world as this, where every species is surrounded and permeated by causes of destruction, will be a short one. But, given a race or a family of races emerging from unconscious into conscious existence, and through countless ages rising to higher and higher phases of life, and it is easy to see that, other things being equal, the individuals in whom this association began to exist ever so faintly would often live where their neighbors would die. They would transmit the association to their offspring, among whom the individuals in whom this psychical feature was more marked would have an advantage over those in whom it was less marked; and so the tendency would be for the association to grow stronger and stronger, until a point was reached in the history of human development, at which, on the one hand, reason began to protest against the closeness of this alliance; and on the other hand, the family affections and the sense of duty, and religion, began to take the place of crude fear and to make this association less necessary. The mastery of the higher emotions over the initial union is shown by the readiness with which men of the higher races face death in pursuance of what they consider to be a good cause, such as the cause of religion or of national honor. If this reasoning be true, and it is true, then here in the deepest part of our nature circumstances have compelled humanity through countless ages to affirm a lie. In the case of our own ancestors, the culminating point of this association was reached and passed before the separation of the Arian people on the plains of Central Asia—be-

fore the existence of the distinct races who spoke Sanscrit, Greek, and Latin. And we can only judge now what the strength of this union was then by the observation of races whose present stage of development is on a par with our condition at that time. And we know from the universal testimony of travelers, and many of us from our own observation, that fear bears a much larger proportion to the other emotions in the savage mind than in the civilized—that it is even absolutely more developed; and that its union with the idea of death is stronger in them than it is in civilized man.

The union existing between love in the bosom of the mother and the mental image of her child is as strong as, if not stronger than, any other association of a moral state with an idea. So strong is this association, that almost all kindly feeling, not only in the grown up woman, but in the female child as well, suggests this mental image in some form or other. In the child it takes the form of a doll. To the childless woman, a dog, or perhaps a cat, supplies the place of the infant which should exist but does not. On the other hand, the mental image of all forms of helplessness and infancy awaken in the female mind this motherly tenderness. This union is no doubt largely due, as in the case last considered, to the influence of natural selection, since this cohesion is as needful to the continuance of the life of the race as the other cohesion is to the continuance of the life of the individual. Why not, therefore, say of this, as of the other association, that it is a fraud perpetrated by circumstances? Why not say that this association also is purely artificial, and has no warrant in the truth of things? I hope some day to answer this question. I can not answer it here. The answer would be as long as several such essays as this. I may say here, however, that the question really is:—Does the central

fact of the universe, as it stands related to us, justify on our part Fear and Hate, or Love and Faith, or does it justify neither? I believe, and I believe I can show, that it justifies love and faith.* The associations are, both of them, undoubtedly, the fortuitous products of circumstances. But if love and faith are justified, and fear and hate are not, then it is certain that maternal love is justified, and that the fear of death is not justified.

The third and last class of emotional excitants which we have to consider consists of sense impressions acting upon the moral nature without the intervention of thought. The nerves of the special senses lead from the periphery directly to the cerebro-spinal nervous centres. So, as a rule, when sense impressions are followed by mental states, which last are aroused by them, the first phase of the mental state is a thought, the realization by consciousness that something is occurring in the outer world; and if an emotion is excited, it is so secondarily, by the association in the past of the idea directly excited with the emotion which is excited in the second place. This rule holds good as regards the senses of sight and touch more absolutely than as regards the other senses, and it is more true of sight than of any other sense.

The impressions received through the sense of taste can hardly be said, as a general thing, to excite thought. They do excite a sort of emotion. The sense of smell varies greatly in different individuals in its power of exciting thought or emotion. Oliver Wendell Holmes describes wonderfully well how in some people it calls up emotions. In others this sense excites ideas very readily,

* It may seem to some readers that this question has been fully answered already. It did not seem so to John Stuart Mill, of England, to Auguste Comte, of France, or to Arthur Schopenhauer, of Germany.

so that they can name a drug or other odorous body more readily from its smell than from its look. Others again can not name the commonest things from their odor. The excitation of this sense with them awakens a pleasant or disagreeable sensation, and the effect stops there. But the sense of hearing stands apart from the other senses, in the degree to which it is capable of transmitting impressions directly to either the centres of intellectual or emotional life. Our knowledge of the anatomy of the nervous system is not minute enough to enable us to say why there exists these differences between the senses; why, for instance, sight awakens only ideas, and hearing either ideas or emotions according to certain differences in the sounds. We know that if we trace the optic nerves inward we shall find that they arise, by means of the optic tracts, from the posterior and superior part of the mesocephale, and are more or less connected to other parts of the brain in that neighborhood. If we trace the portio mollis of the seventh inwards, it divides into two roots; one of which passes deeply into the central part of the medulla oblongata, the other winds around the corpus restiforme to the floor of the fourth ventricle. Now if it were possible to trace these roots, and if upon tracing them to their origin it was found that one of them belonged to the great sympathetic system and the other to the cerebro-spinal, a most important link in the chain of my argument would be supplied. But we can not say that this is the case. Failing in this anatomical proof of a special connection between the auditory nerve and the great sympathetic, is there anything else about this nerve that would make us think that it contained sympathetic fibres? There is one thing. The auditory nerve is exceptionally soft in texture for a cerebro-spinal nerve—hence its name “portio mollis;” and we know that sympathetic nerve

trunks are softer in texture than the trunks of cerebro-spinal nerves. This fact might lead us to suspect that in the "portio mollis" there are sympathetic fibres mixed with cerebro-spinal fibres, but it can do no more than awaken such a suspicion.

Now, as to the sense of hearing itself. All the infinite variety of sounds that strike upon the human ear may be divided, according to their effect upon the human organism, into two great classes—those, namely, which primarily excite ideas, and those which primarily excite emotion. The noise of a carriage on the street, of fowl in the yard, of steamboats and trains passing, these and thousands of other ordinary sounds simply excite a mental recognition of what the sound proceeds from. But if you lie under pine trees on a summer's day and hear, without listening, the wind sigh and moan through the boughs, the emotional nature is moved, irrespectively of any idea that may be excited. So at the bedside of a sick child its moans and cries of pain affect us quite out of proportion to, and irrespectively of, the value our minds may set upon them; for even if we know that the child is not dangerously ill, nor suffering very much, still we can not prevent, as is said in common language, its cries going to our heart. And they do go to the heart, or at least to the nervous centre of the emotional nature, direct. So a cry of pain or distress, heard suddenly, awakens a corresponding emotion in the hearer before any thought is aroused.

The types of these two classes of sounds are, on the one hand, spoken language, and, on the other hand, music. The former we know appeals directly to the intellect, and does or does not arouse emotion, according as the thought awakened is or is not associated with an emotional state. The latter we also know appeals directly to the emotions, and only awakens thought secondarily,

if it does so at all. Now, does that class of sounds which appeals directly to the moral nature possess any quality which the other class does not possess, which would make us think that it, rather than the latter, acts upon the sympathetic? It has one such quality—viz., rhythm. All music is rhythmic, and all language which appeals most directly to the emotions, that is to say all poetry, is also rhythmic. Now rhythm is one of the leading qualities of the functions of the great sympathetic. All motions governed by it are rhythmic—the heart's motion, the peristaltic motion of the intestinal canal, and the contractions of the uterus in labor. I myself have no doubt that the period of utero-gestation, the determining cause of which has puzzled the world so much, as well as the periodic recurrence of ovulation, are both due to the same cause—namely, the rhythm, or periodicity of function of the great sympathetic nervous system. Doubtless the chief advantage of regularity of time in taking meals is due to the fact that the gastric and salivary glands, and other organs concerned in digestion, being governed by the sympathetic, their functions are best performed rhythmically. The rhythmic, daily rise and fall of temperature, both in health and disease, is another example of the rhythm of a function which is under the control of this nervous system.

The only thing that remains now for me to do to complete this very imperfect sketch of a most important subject is to consider briefly the expression of the emotions, to see if we can determine from which nervous system these phenomena proceed. As we can not pretend to discuss the whole of this branch of the inquiry, I shall limit the few remarks I have to make to the expression of joy, grief, hate, fear, and to the expression

of, or rather the effect of, long-continued excessive passion of any kind.

If joy is at all marked in degree it alters the heart's action; if excessive and sudden it arrests it momentarily; if more moderate in degree it makes it more frequent and stronger. Excessive joy causes pallor for a short time, and then slight flushing; moderate joy hightens the complexion. If joy is at all extreme it excites lachrymation in persons of mobile nervous organization. Sudden and great joy destroys the appetite, apparently by checking the salivary and gastric secretions; moderate joy stimulates the appetite, doubtless by exciting the secretions which assist in digestion.

Now, all the above are disturbances of functions which are controlled by the sympathetic; but we know that joy also gives rise to movements of various kinds—for instance, laughter, clapping of the hands, stamping of the feet, which are performed by voluntary muscles under the control of the cerebro-spinal nervous system. The peculiarity of these movements is that they are all rhythmical, and we know what a tendency there is for the functions of the sympathetic to be performed rhythmically. And further they are all objectless; the intellect takes no cognizance of them, and no purpose or intention underlies them.

Now, I do not mean to argue that it is the great sympathetic which excites the muscles to action in the production of these movements; but what I would suggest for your consideration is that the great sympathetic, being the nervous system primarily excited, it excites the cerebro-spinal system by means of its elaborate connection with the latter, and the cerebro-spinal system, acting under the influence of the great sympathetic, the character of the action of the former is stamped by the influence of the latter.

Grief is expressed by tears, pallor, loss of appetite—phenomena which belong to functions under the control of the sympathetic; by sobbing, wringing of the hands, and swaying to and fro of the head and body—motions which are under the control of the cerebro-spinal nervous system and which are rhythmical. Excessive grief kills. I have known of one death which was plainly due to this cause. The fatal result of grief is due to interference with nutrition or with the heart's action, the event in either case being brought about through the sympathetic.

Hate or rage, if intense, is marked by pallor and partial arrest of the heart's action; if moderate, by flushing; if considerable, but still not intense, the flushing is extreme, the face becomes purple, the veins of the neck and forehead swell. Monkeys, as well as men, are said to redden with passion. Some authors say the pupils always contract in rage, and this we can easily understand; for if the muscular coat of the arteries is relaxed, as it is shown to be by the distension of the vessels, which causes the flushing, then the radiating fibres of the iris, which are also supplied by the sympathetic, would be equally in a semi-paralyzed state, and the circular fibres, which are supplied by the third nerve, would have less than usual to antagonize their ordinary tonicity, and the pupils would contract. In great rage there is often trembling. This phenomenon I shall consider further under the head of fear. The above mentioned are the primary signs of rage, and they are all functional changes, effected through the sympathetic. Other signs of rage, such as snarling, setting the teeth, clenching the fists, are manifestly secondary. They result from an intention in ourselves, or in our ancestors, to do something in consequence of rage, and are not the direct effect of the passion itself.

The disturbances of function which accompany fear are frequent and feeble action of the heart, pallor, and dilatation of the pupils. And I wish you, particularly, to remark that whereas in rage there is flushing of the face and contraction of the pupils, as I have shown above, in fear there is pallor of the face and dilatation of the pupils—the muscular coats of the arteries and the radiating fibres of the iris, being both supplied by the sympathetic, are both stimulated to contract under the influence of terror, and are both relaxed in rage. In fear there is also suppression of the salivary and gastric secretions, extreme dryness of the mouth, and complete abeyance of the appetite; there is frequently increase, sometimes very marked, of the urinary and intestinal secretions.

Trembling is one of the most characteristic signs of fear. This is a movement of the voluntary muscles; but it is not a voluntary movement, the will having no control whatever over it. Trembling occurs in other emotional conditions besides fear, as in joy and rage. The shaking of ague, though not associated with any emotional state, is, I have no doubt, closely connected with emotional trembling. No author with whose works I am acquainted gives any explanation of this phenomenon. Were I to attempt an explanation myself, it would be that trembling is the peculiar movement of the voluntary muscular tissue when thrown into action, not by its own proper nervous system, the cerebro-spinal, but by the sympathetic. And I would argue that this was the correct view of the case—first, because it is certain that trembling occurs when the sympathetic is highly excited; secondly, because the cerebro-spinal nervous system can not, as far as we know, cause such a movement, and can not control it when caused; and thirdly, because of its peculiar rhythmical character,

which allies it to other movements originating in the sympathetic.

If I had space, which I have not at present, I could support these arguments by showing, I think conclusively, that ague, of which a peculiar trembling is one of the most prominent symptoms, is certainly a functional disorder of the great sympathetic, and it is upon this fact that its peculiar rhythm or periodicity depends. With regard to the sweating of great fear I have no explanation to give. I will simply remark that, when, by division of sympathetic trunks, a part of the surface is to a great extent deprived of its connection with the sympathetic centres, that part of the surface is bathed in sweat.

I have quoted very few experiments upon the sympathetic in this essay, for the reason that I put very little confidence in the deductions drawn from them. To divide large sympathetic trunks, or to remove large sympathetic ganglia, must cause a disturbance of the general system which would necessarily mask, to a great extent, the peculiar effects flowing from the lesion of the nerves operated on; and any one who has paid attention to the literature of this subject can not have failed to notice how contradictory are the positions supposed to be established by these means. Without denying that experiments may in the future throw light on this branch of physiology, I think it is safe to say that they have thrown very little upon it yet.

If there is one fact in relation to the functions of the great sympathetic better established than any other, it is that this nervous system exercises a most decided control over the process of nutrition. Now I beg of you to consider for a moment, what a curious relationship exists between the process of nutrition and the habitual state of the moral nature. The best observer

of man that ever lived on this planet makes Cæsar say to Antony :

Let me have men about me that are fat.

* * * * *

Yond' Cassius hath a lean and hungry look.

He thinks too much ; such men are dangerous.

Shakespeare says, what we all know, that men in whom dwell a preponderance of evil passions, such as hate, envy, and jealousy, are as a rule ill-nourished. The converse of this is as notorious, so that fat and jolly go together as naturally as do any two terms in the language. Not only does this general law hold, though liable to many exceptions, from the operation of other laws interfering with it, but we find it equally true that any long-continued, inordinate passion, be it sexual love, hate, envy, or grief, is capable of influencing nutrition in a marked manner. Long-continued thought does not produce any such effect. If it seems to do so sometimes it is because the student deprives himself of air, exercise and sleep, in his ardent devotion to knowledge. Newton was as fat when he finished the "Principia" as when he began it. The writing of the "Novum Organum" did not reduce Bacon's weight a pound. Shakespeare, in whose splendid brain fermented all the ideas of his time—and it was a time, perhaps, of more ideas than the present, much as we pride ourselves in this respect—was a well-nourished man. The moral natures of Newton and Bacon were calm and serene. Shakespeare's heart glowed with a genuine love of humanity. If the moral nature be, equally with the intellectual, a function of some part of the cerebro-spinal nervous system, why are the undoubted functions of the great sympathetic so intimately connected with the former and so entirely unconnected with the latter ?

In conclusion, were I to attempt to draw a comparison in a few words between the functions of the cerebro-spinal nervous system and those of the great sympathetic, I should say that whereas the cerebro-spinal nervous system is an enormous and complex sensory-motor apparatus, with an immense ganglion, the cerebrum, whose function is ideation, superimposed upon its sensory tract, and another, the cerebellum, whose function is the coordination of motion, superimposed upon its motor tract, so the great sympathetic is also a sensory-motor system without any superimposed ganglia, and its sensory and motor functions do not differ from the corresponding functions of the cerebro-spinal system more than its cells and fibres differ from those of this latter system; its efferent or motor function, being expended upon unstriped muscle, and its afferent or sensory function being that peculiar kind of sensation which we call emotion. And as there is no such thing as coordination of emotion, as there is coordination of motion and of sensation, so in the region of the moral nature there is no such thing as learning, though there is development. And in the moral nature the ignorant man, or the uneducated woman may be, and often are, superior to the cultivated members of our race.

Upon the above view of the relative functions of the two great nervous systems, the only efferent function of the sympathetic is stimulation of unstriped muscle; and we should have to view its influence upon secretion and nutrition as due to its power of contracting or allowing to dilate the coats of the arteries. And this is in all probability very near the truth. Looked at in this way, the bulk and complexity of structure of each nervous system seem to correspond with the scope of its functions; for the sensory-motor functions of the

cerebro-spinal system, including ideation and coordination of motion, would be as much in excess of the functions of the great sympathetic nervous system in amount and complexity as would the ganglia of the former be in excess of those of the latter in complexity of structure and bulk.

NOTE.—Though in this essay I have spoken of the intellect as a function of the cerebrum, and of the moral nature as being a function of the ganglia of the great sympathetic, I do not wish it to be understood that I pretend to know anything about the real relation which subsists between these organs and these mental manifestations. I have simply used this word as the most convenient expression I could find for some certain connection, the exact nature of which is unknown.

PROCEEDINGS OF THE ASSOCIATION OF MEDICAL SUPERINTENDENTS.

LINDELL HOTEL, ST. LOUIS, May 29, 1877.

The Association was called to order at 11 A. M., by the President, Dr. Charles H. Nichols:

Fellows of the Association the hour for our Thirty-first Annual Meeting has arrived, and we will proceed to business. I have the pleasure of introducing the Honorable Mr. Overstoltz, the mayor of the city in which we are convened.

His Honor then addressed the Association:

Gentlemen of the Convention: As the representative officer of the City Government, I appear here to tender you, on behalf of our people, a sincere and cordial welcome to St. Louis. We esteem it an honor that our city should be the scene of your deliberations, and we regard with interest and respect the noble and benevolent purposes which you are assembled to promote. In this progressive Western metropolis, our chief and constant study is the advancement of mercantile and industrial enterprises, but we have not forgotten the axiom that there can be no true prosperity without philanthropy. The spirit of Christian civilization quickens the conscience and heart at the same time that it excites the generous rivalries of commerce, and puts in play the boundless energies of true industry. It is a spirit of progress, discovery and invention, restless as the sea and untiring as the wind, yet always aiming at one paramount object, the elevation and prosperity of the human race. It stimulates personal and national ambitions, but at the same time it is tempered by benevolence, binds society with a silver cord of sympathy and puts at work a thousand practical agencies to mitigate suffering and to explore and remedy its causes. It is the brightest characteristic of the American people that amid their busiest scenes—in the youngest and most robust cities, where it might be supposed that self interest would engross the thoughts—there is found the most practical

charity and the most extensive institutions for the care of the afflicted.

The convention here assembled represents the philanthropy and benevolence of this country, and I am proud to be able to say that the city where it meets is in the fullest accord with its objects and purposes, and regards as the most important branch of its municipal system the management of institutions kindred to the subject of your deliberations.

The existence of your Association, gentlemen, has, I have reason to believe, exerted a powerful influence in advancing the welfare of the unfortunate class to which your lives are devoted. It certainly promotes a correct knowledge of the treatment of the insane, and gives to the profession and the world the latest fruits of experience and observation. This result is in gratifying correspondence with the honor already achieved in this country in this department of medical science. More than thirty years before Europe, stirred by a spirit of enlightened philanthropy, had provided suitable institutions and humane and intelligent medical treatment for the insane, our incipient Republic established at Philadelphia, in 1750, the first Insane Asylum, based on what are now known to be the only true scientific principles, both as to construction and management. The mad man of the old world was still chained like a wild beast or imprisoned in darkness, when the young nation, just arising into being amid the stern forests, had discovered a new and better way of treatment. The benevolent movement, thus modestly originated, spread beyond the oceans, and has ameliorated the sufferings of thousands throughout the older civilizations of Europe, while it has given birth here to a system of State Asylums that is an honor to humanity.

In the United States, institutions of this character have multiplied to sixty-nine, having an average capacity of three hundred and thirteen patients, maintained at an average cost per patient of \$257.69 per annum, and constructed at an average cost for each patient accommodated of \$996.00. The people of the States have spent in the aggregate considerably over \$30,000,000 in the construction of asylums, and more than \$7,000,000 is annually expended to maintain them. These few figures illustrate the magnitude of the interest, lodged in the hands of the members of this convention, not only as guardians of thousands of helpless beings, but as custodians of this vast property and disbursers, to a large extent, of this enormous annual outlay. The management of asylums, under State or municipal jurisdiction, has a financial

aspect that is important to taxpayers, and in this connection your discussion may be fruitful in developing many useful ideas.

To avoid extravagance in architectural design and in management, and yet to meet all the requirements of the most enlightened treatment, is a problem we do not always find happily solved in connection with asylums. The Institution in this city, which is maintained by the municipality without State aid, is well located and constructed, yet its capacity is not in proper proportion to its cost. The light, ventilation and convenience of the building, are excellent; but the number of inmates that can be satisfactorily accommodated is considerably less than our people had a right to expect for the money expended. This defect might have been obviated by a more accurate and practical knowledge of the requirements of such an institution, and in the diffusion of information of this character, such assemblies as yours, gentlemen, must exert an important influence. So also in reference to the classification of patients, and the selection of guards and attendants, and other questions of vital importance in the treatment of the insane, which create such serious responsibilities for managing boards and local authorities, many valuable suggestions may be derived from the reports of your proceedings. For these practical reasons, gentlemen, and because of a deep general sympathy in your noble aims and purposes, the officers of our government and the citizens of St. Louis feel an active interest in this convention, and are desirous that your visit should be equally agreeable and profitable. I have pleasure in tendering you the hospitality and freedom of the city, and hope to enable you to visit our parks and institutions, under circumstances that may contribute to the pleasant memories of this occasion.

The PRESIDENT. Mr. Mayor, without notice or preparation it is quite out of my power to adequately acknowledge the indebtedness of this body to you for your able and enlightened address and for your proffer of hospitality to its members. Nor is such acknowledgment necessary at this time, perhaps, from the fact that the Association is in the habit of acknowledging, in a series of carefully prepared resolutions, passed near the close of its annual session, such addresses, invitations, hospitalities, and other courtesies as it receives in the course of its meetings, and it will, without doubt, acknowledge its indebtedness to you, and the liberal people whom you represent, in that way. I will assure you now, however, in a word, that the Association highly values your enlightened appreciation of the purposes, responsibilities and labors of this body.

MAYOR OVERSTOLTZ. I desire to say to you again that I am anxious to make your stay in this city as agreeable as I can make it, on my part; and if you, gentlemen, will designate at an early day, about what time it will suit your convenience to meet me, and have you go with me to see such objects as may be of interest, and pay a visit to our public and charitable institutions, I shall be most happy to accommodate you.

THE PRESIDENT. What has just fallen from you, Mr. Mayor, with the view of giving practical effect to the kind invitations and proffers embraced in your address, adds materially to our sense of indebtedness to you personally, and to your people. It is customary for the Association to appoint a business committee, to which is confided the duty of fixing the time of accepting such invitations as you have just extended to it. Perhaps this committee will be appointed to-day. When it is appointed it will confer with you in relation to the most suitable time to visit the charitable institutions of St. Louis.

The minutes of the last meeting were then read. The following members were present during the session of the Association:

A. T. Barnes, M. D., Illinois Southern Hospital for the Insane, Anna, Ill.

C. K. Bartlett, M. D., Minnesota Hospital for the Insane, St. Peter, Minn.

J. K. Bauduy, M. D., St. Vincent Asylum, St. Louis, Mo.

H. Black, M. D., Eastern Lunatic Asylum, Williamsburg, Va.

D. F. Boughton, M. D., State Hospital for the Insane, Mendota, Wis.

R. M. Bucke, M. D., Asylum for the Insane, London, Ontario.

W. H. Bunker, M. D., Longview Asylum, Carthage, Ohio.

J. H. Callender, M. D., Tennessee Hospital for the Insane, Nashville, Tenn.

T. B. Camden, M. D., Hospital for the Insane, Weston, West Va.

H. F. Carriel, M. D., Central Hospital for the Insane, Jacksonville, Ill.

Geo. C. Catlett, M. D., Lunatic Asylum, No. 2, St. Joseph, Mo.

John B. Chapin, M. D., Willard Asylum for the Insane, Willard, N. Y.

W. S. Chipley, M. D., Cincinnati Sanitarium, College Hill, Ohio.

Daniel Clark, M. D., Asylum for the Insane, Toronto, Ontario.

Wm. M. Compton, M. D., State Lunatic Asylum, Jackson, Miss.
John Curwen, M. D., Pennsylvania State Lunatic Hospital,
Harrisburg, Pa.

Orpheus Everts, M. D., Hospital for the Insane, Indianapolis, Ind.

F. G. Fuller, M. D., State Hospital for the Insane, Lincoln, Neb.

John P. Gray, M. D., State Lunatic Asylum, Utica, N. Y.

Eugene Grissom, M. D., Insane Asylum of North Carolina,
Raleigh, N. C.

Richard Gundry, M. D., Columbus Hospital for the Insane,
Columbus, Ohio.

Wm. B. Hazard, M. D., St. Louis, Mo.

H. K. Hinde, M. D., Assistant Physician, Lunatic Asylum, No. 1,
Fulton, Mo.

A. De V. Howard, M. D., Lunatic Asylum, St. Louis, Mo.

C. H. Hughes, M. D., St. Louis, Mo.

Walter Kempster, M. D., Northern Hospital for the Insane,
Winnebago, Wis.

Thomas H. Kenan, M. D., Assistant Physician, Lunatic Asylum,
Milledgeville, Ga.

E. A. Kilbourne, M. D., Northern Hospital for the Insane,
Elgin, Ill.

L. R. Landfear, M. D., Dayton Hospital for the Insane, Dayton,
Ohio.

C. F. Macdonald, M. D., State Asylum for Insane Criminals,
Auburn, N. Y.

Andrew McFarland, M. D., Oak Lawn Retreat, Jacksonville, Ill.

Charles H. Nichols, M. D., Government Hospital for the Insane,
Washington, D. C.

Joseph A. Reed, M. D., Western Pennsylvania Hospital for the
Insane, Dixmont, Penn.

James Rodman, M. D., Western Kentucky Lunatic Asylum,
Hopkinsville, Ky.

John W. Sawyer, M. D., Butler Hospital for the Insane, Provi-
dence, R. I.

Charles W. Stevens, M. D., St. Louis, Mo.

J. Strong, M. D., Cleveland Hospital for the Insane, Newburgh,
Ohio.

Clement A. Walker, M. D., Boston Lunatic Hospital, Boston,
Mass.

D. R. Wallace, M. D., Texas State Asylum, Austin, Texas.

J. M. Wallace, M. D., Asylum for the Insane, Hamilton, Ontario.

Also by invitation.

S. R. Wells, M. D., Trustee Willard Asylum, Willard, N. Y.

G. F. Chittenden, M. D., Commissioner of Hospital for the Insane, Indianapolis, Ind.

Rev. F. H. Wines, General Secretary of the Board of Public Charities of Illinois.

Dr. Wm. Corson and Gen. James A. Beaver, Commissioners of the State Hospital for the Insane, Warren, Pa.

C. F. Wilbur, M. D., Superintendent for the School for Feeble Minded Children, Jacksonville, Ill.

On motion of Dr. Stevens, it was resolved that the members of the Board of Health being Trustees of the St. Louis Insane Asylum, be invited to take seats with the Association.

On motion of Dr. Compton, it was resolved that the President be requested to appoint the usual Standing Committees.

The Secretary read letters from Drs. Kirkbride, Jelly, Eastman, Smith, of Missouri, DeWolf, Wilkins and Parsons, regretting their inability to attend the present meeting.

Various invitations were received to visit different institutions in the city, which were referred to the Committee on Business.

The President announced as the Committee on Business, Drs. Stevens, McFarland and Curwen.

On motion a recess was taken for fifteen minutes.

On re-assembling it was, on motion, resolved that the medical profession of St. Louis be invited to take seats with the Association.

The Committee on Business made the following report, which was, on motion, adopted:

The Committee on Business respectfully report that the Association continue in session until 1 P. M. Meet at 3 P. M. and adjourn at 6 P. M., and meet at 8 P. M. Meet on Wednesday, at 10 A. M., for business and reading of papers, and adjourn at 1 P. M. Spend

the afternoon at St. Vincent's Asylum, and hold a session there, and meet at the hotel at 8 p. m. Meet at 10 a. m. on Thursday, for business and reading of papers, adjourn at 1 p. m., and take an excursion down the river in the afternoon, and hold a session at 8 p. m. Meet at 10 a. m. on Friday, for business and reading of papers, adjourn at 1 p. m., and visit the charitable institutions under the care of the city in the afternoon. Meet at 10 a. m. on Saturday, for business and reading of papers.

On motion, Rev. F. H. Wines was invited to take a seat with the Association.

The President then called on the members for the report on the condition of the insane, and the provision for their care and treatment in the several States.

Dr. GENDRY. Mr. President, I have not very much to say about progress in Ohio, except that we have kept steadily at work for the development of the system which I presume I may call the Ohio system—gradually extending our institutions so as to take in every insane person in the State. The State has, since we last met, filled up the institution which Dr. Strong superintends. I believe that is now filled to its full capacity. The Dayton Asylum—my old home—is also full. Athens, more recently my home, was full to overflowing in January; and now the Institution, with which I lately became connected, is about to be opened with a capacity for nine hundred, to receive the rest of the patients in the State. It will be opened, I think, somewhere in the course of the next two or three months, and be ready to receive the whole of that number. We shall probably transfer from the other institutions about seven hundred, and their places will be refilled, so far as vacancies exist, by the chronic insane in the various counties in our State. And I may add, gentlemen, wherever a new institution has been opened in Ohio, every additional bed it affords means the reception of chronic cases, because our first duty always was the reception of the acute cases even, when necessary, by the discharge of old chronic cases. This always has been the law—the policy of Ohio—and it is plainly a good one, but it was carried out for a long time at the expense of the chronic cases which simply arose from the necessity for more room. Now we have reached that condition where I think for a while we shall get on without the necessity of rejecting any cases, of but course the time will come when the hospitals will not be adequate for the

reception of cases belonging to their district. The State is now divided into four districts—five indeed, including Longview, a hospital in each of which is to receive all the patients of its district. And the State is now pledged to that policy in such a way that it cannot well recede honorably. At the last meeting of the Legislature, this legislation was passed, which has, so to speak, put the capstone upon the edifice that Ohio has erected. The pledge is the following joint resolution of the Ohio Legislature: "That it shall be the duty of the State Board of Charities, within ninety days after the opening of the Columbus Hospital for the Insane, to report by name, with so much of the personal history as may be deemed important, all insane inmates of county infirmaries who shall have been declared insane by inquest of lunacy, according to law, to the superintendent of the hospital for the insane in the district in which said county may be located, who is hereby required, so soon thereafter as practicable, to receive said patients without any further proceedings being had; provided that in each hospital for the insane fifty beds shall be reserved for the reception of recent cases at the time this resolution takes effect; and also that if the quotas of each county shall be more than filled by such transfer of these inmates, and the hospital be filled, then such patients whose disease is complicated with epilepsy shall not be transferred.

"That from and after the expiration of said ninety days, it shall not be competent for directors of county or city infirmaries to receive to the care of such institutions any insane person whatever, for any period of time beyond what may reasonably be required to secure the transfer of such insane persons to the State hospital for such district, unless by written permission of the State Board of Charities, whenever they shall consider it for the best interest of any patient to remain in said infirmary.

"That at any time when it shall become necessary for the accommodation of recent cases of insanity (as provided by law) in any State Hospital, to remove chronic cases therefrom, all such chronic cases shall be sent to the care of the Northwestern Hospital for the insane, under such conditions as have heretofore existed with Commissioners of Lucas county, it being distinctly understood that only such chronic cases are intended as would otherwise go to the county infirmaries, and not these who can be cared for by their friends.

"That in order to carry out the intentions of this resolution, the superintendent of each hospital for the insane shall be required to

report to the Board of State Charities the total capacity of the hospital, including number of rooms for single patients, and the number in associated dormitories, at the ratio of one patient to each five hundred cubic feet of space, and also the quota of each county in the district to which said hospital is attached."

Now, Mr. President, I only read that to show that whether we are practically able to carry out our intentions or not, the State is pledged theoretically to do so, and that it will only remain to provide the means hereafter to keep on that course.

The Northwestern Institution was appointed under the stress of circumstances of the county of Lucas, after the destruction of her Hospitals by fire, to receive the patients of that county, and some other counties adjoining, forming a provisional district, and they are supported at the expense of the State. By means of the joint resolution this Institution will still be kept as a nucleus for this part of the State at some future time, because it so happens that that part of the State is without a suitable hospital, and whenever a new institution shall be required for Ohio it will probably be located there. I think, therefore, that there is cause for congratulation that we have carried out so much of the plans which we started upon a great many years ago, though while doing it we have always labored under the reproach of having accommodated our acute, our recent cases, at the expense of those who really demand our services a great deal more than any other class, the long continued, afflicted or chronic cases. We have not changed our law, and we have not changed our intentions, but have simply done the other things,—provided room for those hitherto unprovided for.

I have only one other remark to make and that is during the last meeting of the Legislature some occurrences took place which called the attention of the Legislature to the proper care of the insane convicts; a matter which requires great attention in our State, because unfortunately we have fifty or sixty insane convicts that are confined in our penitentiary, and in consequence do not receive the special care that is necessary for their condition. It so happens from my appointment in Columbus that I am charged to a certain extent with their care. That question was agitated before the Legislature, and a conflict of opinion exists. To gentlemen speaking upon this question I will feel very much obliged, especially those from Pennsylvania, if they will mention what has been done in their respective States upon this subject. I remember that Pennsylvania began; where she stopped I have not heard. I will be obliged if they will refer to it.

The PRESIDENT. What proportion of all your insane will you be able to accommodate at the opening of the Asylum at Columbus?

Dr. GUNDRY. We will have accommodations for nine hundred. There are between seven and eight hundred to be provided for at this time.

The PRESIDENT. So that Ohio will for the present have accommodations for the care of all its insane in regularly organized institutions?

Dr. GUNDRY. I think so, or with few exceptions. I suppose there will be a few exceptions everywhere, but there are some which will not be taken care of, but generally speaking all will be cared for.

The PRESIDENT. The Chair would like to second the request of Dr. Gundry that members in speaking upon this question would express the views they entertain in respect to the proper care of the criminal insane, especially in respect to the practical working of any particular mode of providing for them, with which they may be individually familiar. A deep and wide spread interest is now felt in this matter. When in Cincinnati, on my way to attend this meeting, in an interview with Mr. Shipley, Chairman of the Ohio Board of State Charities, he expressed a strong desire to learn the views of the Association upon this subject.

Dr. GUNDRY. The Governor of the State is Chairman of the Board.

The PRESIDENT. Then I think Mr. Shipley is chairman of a committee of that Board, to which the subject of providing for the criminal insane of the State of Ohio has been referred. At any rate, he informed me that his Board had directed its secretary to attend this meeting, particularly to confer with the members of the Association upon the subject now before it, but that he had been kept at home by sudden illness.

Dr. GUNDRY. One word. I estimate that the total accommodations will be for thirty-five hundred. Taking the ratio of one insane person to a thousand, you will see that this comes up to the proportion.

The PRESIDENT. The Chair will remind the Association that in 1873 the subject of the care of insane criminals was discussed, and that a couple of resolutions expressive of the views then entertained by this body were passed; and it may not be thought worth while to go into the subject at length at this time, unless a member present wishes to dissent from the resolutions.

Dr. GUNDRY. I simply ask that if there is any State carrying out the views of four years ago, or carrying out any other views, gen-

tlemen will mention it. I promised the Board of State Charities that in conversation or otherwise I would get what had been done.

The PRESIDENT. It seems exceedingly desirable to know just what has been done, and how the principles of the resolutions have worked in practice.

Dr. LANDFEAR. The report of Dr. Gundry has been so complete that it seems to me but little can be added. He spoke of the crowded condition of our Asylum as well as of the other institutions in the State, which we hope will soon be relieved in a measure. We are all gratified to know that Ohio is making so much of an advancement; and I think with Dr. Gundry that we will soon have accommodations for all the insane. In regard to the criminal insane I have nothing farther to advance, except that it seems to me wrong to place these insane with others in the different hospitals, where many of the patients seriously object to it. I believe that some provision ought to be made for them outside the penitentiary.

Dr. CHIPLEY. Mr. President, there has been little change since last year, when I had the pleasure to report for the Sanitarium. Since last year we have made some alterations in the building, admitting a better classification of the inmates. It is incorporated, is sometimes called a private Institution and numbers between forty and fifty inmates at this time, forty-seven I think. We have made such arrangements that there are eight classes, of course some of them very small. We have a larger number of attendants in proportion to the number of inmates, than is usual in such institutions. Except the classification, there has been no material change since last year. Being a private Institution we have no inmates except from the most intelligent and independent classes of society, who have the means of self-support.

The PRESIDENT. Do you take any sick except the insane, Doctor?

Dr. CHIPLEY. We take some that would not like to be called insane, who are brought to us under the character of nervous disorders, but in all cases some impairment of mind. When I took charge of the Institution some two years ago, one feature consisted of the inebriate element; perhaps a dozen were there at that time. As I had had little experience in that line, and very little confidence in the cure of inebriates in that way, I got rid of them simply by requiring these persons not to leave the grounds without permission, and to pack their trunks whenever they took liquor. The result is I have got rid of them altogether, and we have

received no new cases except those who came voluntarily. They are not intemperate, but come to be treated for the consequences of intemperance, and we try to restore them to health—health that has been destroyed by the use of liquor, opium, etc., and of this class the number is very small, I believe we have but two such cases now. All the rest have their minds impaired; indeed those two have impaired minds. But we do not receive any intemperate except those who have determined to abandon altogether their intemperance, and seek relief from the results of intoxication. The inebriate element is entirely excluded from the Institution, and it is purely for those whose minds have been impaired from different causes.

The PRESIDENT. Dr. Walker there are no representatives from Maine or New Hampshire at this meeting of the Association as yet; and the Association will, I am sure, be glad to receive any information through you that you may be able to communicate in respect to those States, as well as in respect to Massachusetts. Indeed I will include Vermont, which I think has no representative here.

Dr. WALKER. I can not even represent Massachusetts, much less all the New England States. In my own person I represent Boston simply, and have nothing to do with the State institutions.

The PRESIDENT. You are the senior member in the State of Massachusetts.

Dr. WALKER. So far as I have knowledge of neighboring States, Maine and Vermont are doing very well in the way of improvement and progress. Certainly this is so at Brattleboro where, under the lead of Dr. Draper, very remarkable progress has been made. In Maine Dr. Harlow is holding his own. The Hospital at Augusta never had so fully, as now, the confidence of the State. It never accommodated so many patients comfortably as it does to-day. The same is true of New Hampshire. The Concord Asylum is doing a good work there. It ranks as high as ever. Dr. Bancroft has returned from Europe in good health, and is doing all that is needed for the State of New Hampshire. In Massachusetts a great deal of money has been spent during the past three years. At Taunton they have increased the accommodations for patients about one-third. The class of accommodations thus added is of the very best; making out of that old and defective structure, an Institution very creditable to the State and to the gentleman who has the management of it. It has been overrun with patients. They have been obliged to make beds on the floor,

under the tables and almost in the entry-ways; but none but *good reports* come this way from Taunton. The numerous patients discharged from treatment or custody say nothing but good of the Institution and its management.

Three years ago the Legislature made an appropriation for the erection of a new hospital at Worcester, in place of the old one. This is nearly finished at an expense already of more than one million three hundred thousand dollars, and I believe that Dr. Eastman is now engaged in furnishing it, or some portion of it.

Dr. RODMAN, Kentucky. Was one million three hundred thousand dollars appropriated by the State, or does that amount include what was received from the sale of the old one?

Dr. WALKER. There has been no sale of the old Hospital estate at all. The new Hospital will be occupied early the coming fall, I believe.

Dr. RODMAN. When the old Hospital is abandoned of what practical use will it be?

Dr. WALKER. I will come to that directly. The Legislature also appropriated nine hundred thousand dollars for a hospital in the eastern part of the State, for the accommodation of Suffolk, Middlesex and Essex counties particularly. This was located at Danvers. The Institution is now nearly finished and will be occupied early next spring, probably before that. It has cost very much more than was intended at the outset, and will, I think, when completed and ready for the furniture, be found to have cost at least one million five hundred thousand dollars. When crowded it will accommodate five hundred patients.

Just before the adjournment of the last Legislature a bill was introduced with little discussion, and passed with no opposition, diverting the old hospital at Worcester, from sale and abandonment. The original intent of the Legislature was, I believe, to sell the buildings and the lands. In fact the Trustees were empowered to sell and to use the proceeds in the building of the new structure; but it was afterwards deemed unadvisable to sell at the present panic valuation of real estate. The Trustees accordingly fell back upon the State Treasury, and drew therefrom all moneys needed for the new Hospital. Just before adjournment the Legislature passed an act to retain the old building as a hospital, continuing it in the care of the same Board of Trustees, that now has charge of it and the new one; and to have it occupied by the chronic insane. Just where they draw the line of division I do not know. I doubt if anything definite has been determined in

relation to that question. Whether it will be a larger Tewksbury receptacle or not I do not know, can not conjecture. My impression is that it will be run as a first-class hospital, but used as a reservoir for the overflow from the other hospitals in the State, which, when full, may transfer for relief, both chronic and acute to the old Worcester Hospital.

The PRESIDENT. Will it have a separate superintendent?

Dr. WALKER. I think that has not been determined. That will be determined, probably, by the next Legislature. I very much doubt whether the two Institutions will be kept under one management. Possibly they will be under one Board of Trustees, but I doubt very much if one superintendent will have charge of both Hospitals.

The Trustees of the McLean Asylum not long since purchased an excellent farm a few miles from Boston, and even proceeded to have prepared partial plans for a new asylum structure, or structures. But after careful consideration the project was postponed to more propitious times.

What I have briefly recounted is a fair, if not full, report of what has been done in Massachusetts in this direction during the past three years. I know nothing personally (I am sorry and ashamed to say) of the Northampton Hospital. I know that no very great radical changes have been made during the past year. Dr. Earle is known to us all, as a most careful, but progressive manager; and it is generally understood, that he has accomplished a remarkable work at Northampton, and that he is now keeping that Hospital up to the highest point of excellence, of which it is capable; and that too in the face of obstacles that might well have disheartened and dismayed younger men of less experience. Dr. Earle has had remarkable success. The Northampton Hospital is a credit to Dr. Earle and an honor to the commonwealth of Massachusetts as a charitable Institution.

The PRESIDENT. What proportion of all the insane of Massachusetts will be accommodated when the hospitals at Worcester and Danvers are done, including the old one at Worcester for chronic insane?

Dr. WALKER. I think something more than three-fourths, I have not the papers and cannot tell decidedly about that. The hospital at Taunton will accommodate four hundred comfortably. The hospital at Danvers will accommodate five hundred crowded as it will be. The two hospitals at Worcester will accommodate nine hundred, and Dr. Earle's not less than four hundred. The recep-

tacle at Tewksbury has about three hundred, and I suppose will be retained even if the old hospital at Worcester is. The Boston Hospital is full with about two hundred patients. It was originally intended, about four years ago, when the Danvers hospital was completed, that the city should have the first occupation of it, to use such portion as we might require. It was believed that the old hospital at Boston would be abandoned. It is very doubtful whether that will be done. If it is postponed until after next winter it will not be done, as it will be too late, for the other will be full. Nothing new has been done in Boston, the best improvements having been made about four years ago. All we can do is to keep it where it is.

In regard to the criminal insane in Massachusetts after the law was passed granting power to erect two new hospitals in Massachusetts, a subsequent act was passed requiring the commissioners of those two hospitals to make ample provision for violent insane prisoners in the State. That term was used, or intended to apply, to what are known as insane criminals. Some three years ago a large appropriation was made for the building of a new State Prison. They are now putting up that institution. The chairman of the commission was formerly a member of the Board of Directors of the Boston Hospital for the Insane, one of my directors and a personal friend. I urged upon him the desirability of providing for that class of criminals in that institution. Without saying anything about it, or making any further disturbance, I understand that they have made provision in the State Prison for about thirty insane, inside the grounds I am sorry to say, connected with the main building too. It was thought unadvisable to attempt to separate the building even within the same enclosure. It is entirely separate from the convicts, and if I have the right idea of it, it will have on the whole, I may say, exceedingly comfortable accommodations. At present if any convict in the State Prison becomes insane, a commission consisting of two State Superintendents, the Superintendent of the Boston Hospital and the McLean Asylum, together with the prison physician, form a commission to determine in the first instance whether they are insane or not, and whether they shall go to a hospital. It has been our feeling for years to give every prisoner, no matter how violent and insane, the benefit of hospital accommodation, if possible to provide for him. Although superintendents are loth to receive, yet it must be said to their credit, I never knew one to refuse when they had to meet one from the commissioners. Here-

tofore they have been sent to the State hospitals. If they recovered before the expiration of the term for which they were sentenced, they were sent back. If they did not recover, unless very dangerous, they remained in the hospital until they did. In one or two instances they were remanded to prison for safe keeping.

The object of the provision in this prison is to prevent the necessity of taking a prisoner away, and in that way, rather indirectly than otherwise, familiarize authorities to keeping insane criminals within the enclosure of the State prison. In that way without any discussion whatever, the policy of the State will be determined that the insane criminals shall not hereafter be housed under the same roof with other insane people.

Dr. KEMPSTER. What facts have been elicited in regard to the killing of the attendant by a patient in the Northampton Hospital?

Dr. WALKER. None whatever, if I understand it right. The statement was this—that the man was on duty alone. He was the sole attendant of that ward, and while at dinner, I think it was, he must have been assaulted. He was found dead, with his throat cut and his person badly abused. All efforts to discover who among the patients had instigated it, or who assisted in the assault utterly failed, or had failed the last I heard about it. Dr. Earle stated that he had on several occasions supplied this attendant with assistant attendants, and that every time the attendant asked for the removal of the assistant, that he got along better himself. He therefore allowed him to have charge of that ward. But even if there had been two attendants, one or the other of them would have been left alone there at the hour this homicide occurred. I think it was at dinner or a meal hour.

The PRESIDENT. Why, doctor, would one attendant have been left at that hour alone with the patients?

Dr. WALKER. I did not ask why. I suppose it was because the attendants dined together and not with the patients, and if so one-half would go to dinner and leave the other half on duty. I recollect that Dr. Earle feels that there is no responsibility upon him whatever, in regard to this man's death. His remark was that if he had had an assistant, it would have occurred.

Dr. SAWYER, Rhode Island. There has been no legislation in regard to insanity in Rhode Island during the last year. The number of insane has probably increased. We have now in the Butler Hospital one hundred and sixty-five patients, and the State Asylum for incurables has two hundred and ten. There are about seventy-five insane in the State residing with their friends, or in the poor houses.

It is well known that the policy pursued by Rhode Island, in regard to the dependent insane, is to send them to a curative hospital till the probability of recovery is gone, then to transfer them to the State Asylum for incurables. This institution is located upon the State farm, and managed by a deputy superintendent. A physician visits the patients twice a week and oftener if called. They have no treatment for mental disease. Theoretically only incurables are sent to the State Asylum, but it occasionally happens that a person who has been insane and has recovered, is sent there in a second or third attack and recovers, or that one is transferred from another institution too early. The insane criminals of Rhode Island have been sent to hospitals as other insane are. We have had two or three in the Butler Hospital, but all have now been transferred to the Asylum for Incurables. There is now one insane man in the Rhode Island State prison, who was committed there many years ago for murder on the high seas. The managers of the prison have repeatedly sought to have him removed to some hospital. The Butler Hospital being full, various institutions out of the State have been applied to but none have been found willing to admit him. I was called to examine him for the purpose of his removal to the State Asylum, but he showed so much cunning and inclination to violence and so little moral sense that it seemed certain he would break out of that institution, and I therefore advised his being retained in the prison, till some more suitable place be found.

As to Connecticut, I only know that the Hospital at Middletown is quite crowded. I have frequent application for the admission of patients from that State.

On motion the Association adjourned to 3 P. M.

The Association was called to order at 3 P. M. by the President and resumed the consideration of the care and provision for the insane.

DR. J. B. CHAPIN. There are in the State of New York at the present time six State Asylums or Hospitals, completed or in the course of construction. The present capacity of these institutions is about twenty-five hundred. The estimated number of the insane in the State deduced from a careful census made in the year 1872, was six thousand seven hundred and ten. There are perhaps seven thousand insane persons in the State at the present

time. When the present asylums are completed their capacity will be about three thousand five hundred. At the present time the insane not in the State Asylums, are cared for in municipal institutions, or in the county almshouses. The Legislature last year made small appropriations for completing institutions now in the course of construction. No changes were made in the law regarding the commitment or care of the insane. It is a fact that is pushing itself upon our attention, that, while our asylums are very much crowded, the number of the dependent insane is rapidly increasing. Certainly within the past fifteen years the number has doubled. Dr. MacDonald is at present with us; he is from the asylum at Auburn, and I think we may profitably hear from him relative to the criminal insane.

DR. C. F. MACDONALD. The Institution at Auburn, which I represent, has now about one hundred patients, and with the exception of an occasional escape, everything has been going on smoothly for some time past. Since my last report to the Association a great many repairs and improvements have been made, the discipline has been raised to a higher standard, the patients almost without exception have improved in physical health and general demeanor, and during the past ten months there has not been a single death. This I attribute largely to a liberal diet and the improved sanitary condition of the building.

One very important change has occurred since our last meeting. By the adoption of a constitutional amendment submitted to the people of New York at the late general election, the board of inspectors of State Prisons was abolished, and the office of Superintendent of State Prisons (to be filled by appointment emanating from the Governor) created instead, the object being to place the entire department beyond political partisanship. The Governor appointed to the new office Mr. Pillsbury, the experienced and able superintendent of the model Penitentiary at Albany. Under the new system, although but a few months in operation, there has been a complete revolution in the management of the whole department; party influences in the appointment and discharge of officials have entirely disappeared, and new employes are elected with special regard to their qualifications and fitness for the places they are to occupy; and each one is given to understand that his retention in the service depends upon the faithful and proper discharge of his duties. The wardens of the several prisons and the Superintendent of the Asylum have plenary power in conducting their institutions, and very properly are held

accountable for the management and condition of the same. This change can not be otherwise than beneficial to the Asylum, and yet looking to the future of the Institution I am not sure but that it would be better to place it on an equal footing with the other asylums of the State, and to similarly organize it. As Dr. Gurdry has called for an expression of the views of members of the Association upon the subject of the care and custody of the "criminal insane," a word upon that point may not be out of place at this time.

Having been connected with an ordinary hospital for the insane for several years I am perhaps better prepared than some of my brethren to make a comparison between the conduct, mental manifestations, and methods required in the management of the two classes; although as yet my experience in the care and treatment of insane criminals has not been sufficiently extended to warrant me in expressing an opinion that may be accepted as authoritative. But the short experience already had is sufficient to convince me that the opinion expressed by this Association in one of its resolutions, that the criminal insane should be provided for in institutions by themselves, is an eminently wise and proper one. The vice and depravity with which many criminals are filled are not at all, or rarely, neutralized by the admixture of mental disease. In the Asylum at Auburn there are both convicted and unconvicted patients, and I have observed that the former generally exercise an injurious influence upon the latter, although both are classed as criminals. Insane convicts are often adepts in picking locks, cutting bolts and bars, and devising other means of escape, sometimes even conspiring together for that purpose. On searching patients when they come from the prisons it is not rare to find steel saws made out of watch springs, and knives and other implements concealed about their persons for the purpose of effecting an escape. A hospital for the *convict* insane must necessarily partake somewhat of the character of a prison in its *custodial capacity*, but it need never become a primitive establishment. I constantly endeavor to impart to my Institution the tone and appearance of a hospital.

Insane convicts, as a rule, require constant surveillance, and must be denied many of the privileges that are extended to the inmates of our ordinary asylums. I went to Auburn with what might be termed radical or "Scotch" views respecting the degree of personal liberty that should enter into the treatment of the insane; but I soon found that I must either modify my practice in

this regard, or devote a major portion of my time to the pursuit of elopers, not to mention the liability to accidents. There have been some mistakes made, I think, in the location, construction, organization and management of the Asylum at Auburn. In the first place, it is in the immediate vicinity of a large prison, and the people of the city generally speak of the Institution as the "Convict Asylum," or "Prison Asylum," terms which are very odious to the *unconvicted* patients; secondly, it is surrounded by railroads and factories that disturb the quietude of the house both night and day; thirdly, there is no farm, and scarcely a garden attached to it, a lack which prevents, to a large extent, the utilization of the labor of its inmates. Convicts not infrequently feign insanity, with a view to obtaining the diet and privileges of the Institution, or with the hope that they may find an opportunity to escape. Some cases that have been successfully treated and returned to prison seem to think that the fact of their having been in the Asylum relieves them from all responsibility, and, consequently, they are very reckless in their actions. Even in the Asylum the idea of irresponsibility prevails to a certain extent, and I have experienced great difficulty in impressing patients with a sense of their responsibility. They boast that they can destroy life and property without incurring punishment, because they are in, or have been in a lunatic asylum.

Another source of embarrassment is the disposition of a certain class of *unconvicted* patients—persons who have committed murder, and have either been acquitted or not tried on the ground of insanity. The particular class to which I refer is made up of individuals whose mental disease is due largely to intemperance and its usual concomitants. The disease in these cases frequently subsides under the regularity and quiet of asylum life, and patients soon become rational and apparently sane, and in the course of two or three years they begin to feel that they have paid the penalty of their offense; they chafe under confinement, complain of being restrained of their liberty and clamor for release. The responsibility involved in the liberation of such cases is very grave, and one that courts are loth to assume, especially in view of the strong probability that, if let out, they would return to their former habits and associations, and experience a return of the malady that would render their condition as bad, or even worse than it was before.

Dr. CURWEN. • All I can say for New Jersey is that from the last accounts I have they are all doing very well. The new Insti-

tution at Morris Plains, as the gentlemen very well know, received its first patients upon the tenth of last August. They have now over four hundred.

The Asylum at Trenton is doing very well with about five hundred. A division of the State of New Jersey into districts was made last year by authority of the Legislature, and each institution has a number of counties assigned to it, the Institution at Morris Plains taking the northern half of the State, and that at Trenton the southern half or very nearly the old geographical division of east and west Jersey.

As to Pennsylvania we are pursuing the even tenor of our way. After various efforts to make the improvements at the Hospital at Harrisburg, which have been desired for a long time, I am happy to say they are now going forward so that the Institution will be in a much better and more cheerful condition than heretofore. The Hospital is crowded with patients, but in other respects things are moving on satisfactorily. Appropriations were made by the last Legislature to the Hospital at Danville, to enable them to put up the two additional blocks to the south wing to complete the original design, and the necessary work connected with these additions is the reason why Dr. Schultz is not able to attend this meeting. The Hospital has a large number of patients and everything is going on well. The Hospital at Warren is progressing slowly and steadily; slowly, because the appropriations made by the Legislature are small, only enabling the Commissioners to do a limited amount of work in the season. A large portion of the wings will be put under roof this year leaving the other portions to be erected when the necessary appropriations are made.

At the session of the Legislature two years since initiatory measures were taken for a hospital for the seven south-eastern counties of the State, including Philadelphia. A commission, as provided in the bill, was appointed by the Governor last December, and in the course of last month they made a selection of a site within twenty miles of Philadelphia. To that location strong objection has been made, and the whole matter is now in the hands of the Governor for approval or rejection, as the law requires his approval of the site before its purchase, and also that the cost of the location shall be approved by the Board of Public Charities.

In relation to the institutions in Philadelphia, I may simply say that the Pennsylvania Hospital for the Insane is doing its work, as usual, quietly, efficiently and very satisfactorily. The Insane Department of the Philadelphia Almshouse is greatly overcrowded

having at the last report eleven hundred and fifty, when it should have only about five hundred.

Several years ago when the subject of proper provision for insane criminals was before the Association and agitated, first in Pennsylvania and then brought from Pennsylvania into the Association, the resolutions adopted by the Association at that time were acted upon to a certain extent, by a commission appointed by the Legislature consisting of three members of the Board of Public Charities, three of the Superintendents of Hospitals for the Insane, and one other person whose name was inserted during the passage of the resolution through the Legislature. That commission, after several meetings, unanimously reported in favor of an institution, separate and distinct from any other institution, not within one hundred miles of either of the existing hospitals, to be constructed expressly for insane criminals. That report was printed, together with a plan of the building designed, and distributed to the members of the Association at that time. That report with a bill for the establishment of an institution of the kind recommended was placed in the hands of the members of the Legislature, but thus far financial reasons have prevented any action being taken to secure its erection. The matter, however, will be pressed when the proper time arrives. After the lapse of several years I can not remember exactly what the report was in its details, but I will be glad to place copies in the hands of the gentlemen from Ohio for their examination. After careful examination of other institutions, and the facts and figures given by those who were most conversant, practically, with the subject, the plan of the building was drawn so as to give accommodation to the class designed in the proportion of one female to every five males, that is, the accommodation required for men would be five times that for women.

As Dr. Reed is not in the room I may state that the Hospital under his care continues much crowded, and with that exception they are moving on comfortably. The Legislature has been accustomed to make an appropriation each year for support of that Hospital. By a provision of our new constitution, the appropriation for all institutions strictly under the control of the State, can be passed by a majority vote, but when an institution is not strictly under State control, a two-thirds vote is required. Owing to a difference on political matters towards the close of the session last winter one party rigidly insisted on this, and the appropriation for several institutions, the Hospital under the charge of Dr. Reed being included, was lost, so that they will suffer temporary embarrassments during the year from this cause.

Dr. BLACK, Virginia. Mr. President, I do not know that I have anything of special interest to report from Virginia. I regret exceedingly that Dr. Baldwin and Dr. Barksdale are not here to represent the institutions of which they have charge. As to the institution of which I have charge, notwithstanding the trouble we labor under on account of the loss by fire, we are getting along successfully. We are now engaged in building. The Institution at Staunton, over which Dr. Baldwin presides, is getting along very well indeed. He is maintaining the reputation that the Institution had under his distinguished predecessor, Dr. Stribling.

There is an asylum at Richmond for the colored insane, well conducted by Dr. Barksdale. The policy of the State is to enlarge the Eastern and Western Asylums, so as to accommodate all the white insane, and to build a new asylum for the colored people. Appropriations have already been made by which to enlarge the Eastern and Western Asylums so as to accommodate one hundred more patients in each ward at present, which will be sufficient for those now outside of the asylums.

Last winter the Legislature made an appropriation for building an asylum at Petersburg, for the accommodation of the colored insane, the buildings now occupied being rented. The Legislature will endeavor to make provision to accommodate all its colored insane, by the time the lease expires, which will be in three years.

Dr. CAMDEN, West Virginia. Mr. President, I have very little to report this year, except we are very much crowded, and the Hospital is filled to its utmost capacity. We have now about four hundred and twenty-four in the Hospital, fifteen of whom are colored, and these are all of that class in the State. We have, within the last year, built a colored hospital, an engine house, smoke and ventilating stack, &c., and although we are at a standstill now, I am safe in saying that there is a prospect of getting an appropriation for further construction, at the next session of the Legislature.

Dr. GRISSOM, North Carolina. Mr. President, whatever may be of interest in regard to the increase of accommodations for the insane in North Carolina, may be expressed, I regret to say, in a very few words. During the past year, however, the Institution at Raleigh has been considerably improved, with a view to an increase of comfort for patients and employès, and greater security from danger by fire. The kitchen and laundry have been completely rebuilt, except exterior walls; and the entire refitting has given most satisfactory results. The boiler-house, always a source

of anxiety by reason of the inflammable material of the original structure, has also been rebuilt and made fire-proof, so far as we had means at command. The waterworks have hitherto furnished us a barely sufficient quantity of water for our daily needs. They are now being completely remodeled, and will hereafter afford an ample supply.

The new Institution at Morganton is slowly progressing. The first appropriation was \$75,000. Our people are poorly prepared to meet additional taxation, and the annual appropriation for the continuation of the work is only \$30,000. A fine site has been selected, and about three millions of brick laid in the structure. The water supply is abundant and excellent, but secured at considerable expense, as it is brought nearly five miles through a six-inch iron main, from the mountains. It reaches the building with one hundred and seventy feet of head, and will fully secure it from danger by fire. With the small annual appropriation the progress of the work must be slow.

The Institution at Raleigh is overerowed, with four hundred applications on file, of cases that ought to be under treatment to-day. The prospect, you will see, is not flattering. I am sorry to say that I can not give you any accurate information in regard to our sister State of South Carolina. I trust, however, that the same embarrassments do not continue under which Dr. Ensor labored for a long period. His difficulties have been very uncommon in character, perhaps unprecedented in the history of the Association. He has suffered almost intolerable personal burdens, but has maintained the work of the Institution through them all. I have reason to think that the condition of South Carolina in regard to her insane is improving on account of the greater quiet in the public affairs that now prevails.

Dr. COMPTON, Mississippi. I regret that I am unable to give you any definite account of the condition of the insane in Alabama, and still more that the able Superintendent of the Asylum in that State is not here to speak for himself. In the character of Dr. Bryce we have every assurance that the Institution over which he presides is in a good condition, but I can not speak of the insane of the State who are not under his care. I observe with pleasure that his professional brethren have recently honored him by electing him to the Presidency of the Alabama State Medical Association.

Nor have I any formal report to make from my own State. In general terms I may say that we are doing tolerably well. We

have a new wing now in process of construction, which will be completed in August, when I think we will be able to admit all applicants. The number now in the Asylum is three hundred and fifty. The new wing will accommodate about seventy-five more. This will give us four hundred and twenty-five in a population of eight hundred and fifty thousand, or one to every two thousand. During the past year nothing has occurred in our Institution worthy of note. In regard to the criminal insane in our State we have never had enough of that class to make the subject one of importance. We have only four or five in our Asylum, not enough to justify separate provision. It is well enough to bear in mind that there are two classes under that head; one is the individual who becomes insane after having committed a crime, and has been sent to prison; the other who violates the law while already insane, and is sent to the asylum upon a verdict of insanity. It will be perceived that these classes are very distinct. Perhaps it would be well to separate both these classes from the ordinary insane and from each other; but in small States like the one I represent, where the number of insane criminals is few, the expense of making separate provision for them can hardly be expected or justified.

Dr. WALLACE, Texas. I know nothing in regard to the insane of Louisiana more than, I presume, is known to all of you. I received a copy of the report for the past year, the only one that has come to my address since I have been connected with the specialty. Of the State of Arkansas, what she has done, or proposes to do in regard to the care of her insane, I know nothing directly, but have learned incidentally that the purpose entertained by some of her most enterprising citizens, of establishing an asylum, the incipient steps of which were taken a year or two since, is not likely to meet with a very speedy realization. I regret to have to say that while Texas is progressing, at least Texans themselves being judges, in much that pertains to her material advancement and prosperity, institutions for higher education, protecting her frontier from savage Indians and more savage Mexicans more effectually than heretofore, establishing police regulations, securing internal peace and quiet, and what is more significant in this connection, while hundreds of thousands of immigrants are pouring into the State, spreading over her extended prairies and rich bottoms, developing the resources of the State, doubling her population every few years, with, of course, a corresponding number of insane; I say, while all this is true, there is nothing to report in the shape of additional accommodations for this unfortunate class.

Our State, in common with other Southern States, and perhaps Northern ones also, a year or two ago, alarmed at her increasing debt, took a spasm of economy, and, naturally enough, went to the other extreme. You may talk of grangerism or any other ism you have a mind to, but a reaction was inevitable. We had been indulging in unusual expenditures, and nothing is more in accordance with human experience than that there should be a corresponding reaction. Appreciating the situation I made no special effort with our Legislature. True, I represented to them what was necessary in regard to the care of the insane of the State. They determined to appropriate no more money than was provided for by taxation, while there seemed to be a general desire on the part of the Legislature to give us additional accommodations. The feeling was, there is so much for common-schools, so much for frontier protection, so much for the judiciary, so much for administering the State government, leaving only so much for State charities. There seems to be a very healthy condition of feeling upon this subject in Texas, and I have no doubt that steps will be taken by the next Legislature to make ample provision for the insane of the State. I have the assurance of leading men of the State to this effect. You are aware that the accommodations at present are not adequate to our wants. We still manage, however, as heretofore, to admit all recent cases, as well as those unmanageable outside by ordinary means of restraint. To do this we send out cases no better, perhaps, than those many of you admit. No accident, however, has occurred from this course, but, on the contrary, several recoveries that, in my judgment, never would have been realized under hospital restraint. At the close of the fiscal year, September 1, 1876, there were in the Institution two hundred patients; admitted during first three-quarters of the present year, one hundred; there are remaining at the end of the third quarter, two hundred and thirty-two. This will give some idea of the rapid change of the population. From best information to be had I estimate the insane of the State requiring hospital protection from eight hundred to one thousand, a small number for a population estimated, as ours is, at two millions.

Dr. RODMAN, Kentucky. I am sorry to say, Mr. President, that Tennessee is not represented in this meeting, by reason of the sudden summons of Dr. Callendar to the bedside of a dying member of his family. I regret Dr. Callendar's absence for the reason that I am not sufficiently familiar with recent important events in his State, to give the Association an accurate report of them.

Most of those present will, perhaps, remember that the Legislature of Tennessee, four or five years ago, made appropriations from the public treasury for the purchase of suitable sites for, and to commence the building of two first-class hospitals for the insane, one for the eastern and the other for the western division of the State. Commissioners appointed by the Governor for that purpose bought a suitable property near Knoxville for one of these asylums, but failed to fix upon a location for the other for some reason that I do not now remember. A Superintendent, Dr. Boyd, was chosen for the Eastern Hospital, plans approved and work begun. Before such was done the Legislature met, and notwithstanding the most intelligent and industrious efforts upon the part of those interested, notably Dr. Jones, one of our fellows, at that time a member of the Tennessee Senate, to prevent it, the original bill of appropriation was repealed and so the matter stands at present. Within a few years large additions have been made to the Tennessee Hospital for the Insane. The Asylum now accommodates four or five hundred inmates, under the Saperintendency of Dr. Callender. It is accomplishing a work of the highest character. Its records for years past are, I believe, fully up to the high standard established by Cheatham and his successor Jones, who made it one of the best hospitals in the South.

In regard to our own State I think I am entitled to indulge in a little proper pride. The course of Kentucky has been, in some degree, in contrast with that of Tennessee. Far more liberal provision for the insane has been made in Kentucky than in any other State south of the Ohio, indeed I think that few States in the Union have done as much as ours in affording maintenance for the insane in well-appointed hospitals. Approximately we have fourteen hundred insane in Kentucky. In her asylums there are probably to-day over thirteen hundred patients; five hundred and fifty at the Eastern, three hundred and sixty at the Western, and four hundred and twenty at the Central. Whilst all is not done, it maybe, that could be desired, still I feel as if Kentucky is entitled to a high place on the roll of States, which have done well in the cause of humanity. Three well-equipped Lunatic Asylums, with schools of a very high order for the idiots, for the deaf mutes and for the blind, should make good her claim to this distinction.

Dr. EVERTS, Indiana. I know nothing personally in respect to Michigan, except that they are building an asylum in Pontiac. I have seen a photograph of it and think it is a very handsome building.

So far as Indianapolis is concerned the old Hospital is in as good a sanitary condition as it can be without radical architectural changes. We have spent three hundred thousand dollars on the additional hospital, the apartment for women. It is rapidly being put under roof now and we have an appropriation of three hundred thousand more, which will nearly finish it. Beyond that we have no change of interest in any direction that I know of.

The PRESIDENT. Does the Chair understand you that you are building a separate Institution for females?

Dr. EVERTS. Yes, sir.

The PRESIDENT. And intend to devote the old building entirely to males?

Dr. EVERTS. The law requires that when the new building is done it shall be a department for females and no males; and the old Hospital for men and no women. The building is on the same grounds and under the same management. Our capacity for some-time has been six hundred and ten. The new building will hold six hundred easily and when crowded seven hundred. When filled we will then have over thirteen hundred patients. It will relieve the pressure in the State for many years, although it will not accommodate all the insane. Our applications now are just about double the number received. Our new building will accommodate about all the new applications. The rest that come in will increase the number.

The PRESIDENT. The Chair regards that scheme for caring for the insane as a very important one, and feared that all the members of the Association might not understand your first allusion to it.

Dr. KILBOURNE, Illinois. Any public feeling and sentiment in the State of Illinois towards the specialty in which I am engaged, has been gradually and steadily in the direction of making full and ample provision for the care of all the insane within our borders. During the latter part of the last decade or the beginning of this, the State of Illinois made provision for the erection of two hospitals for the insane, one in the northern and one in the southern portion of the State as has been previously noticed. The one at Anna is about being completed. When completed, with the Institution at Jacksonville and that at Elgin, the accommodation will be for about fifteen hundred insane. The capacity of the Cook county Institution at Jefferson is about three hundred, which with the number in the private institutions will swell the total to about eighteen hundred and fifty accommodated by the first of July.

During the session of our General Assembly last winter, the question was again agitated of making still further provision. Appropriations were made of two hundred thousand dollars to the Eastern Hospital and seventy-five thousand dollars to the Central Hospital. When the Eastern Institution is completed it will probably accommodate five or six hundred. That at Jacksonville will probably accommodate one hundred and fifty more, so that we will have accommodations, when all are completed, for about two thousand. There are about three thousand insane. I am sure the most needy of that number will be accommodated. I think Illinois is doing as well as her sisters.

The PRESIDENT. The Chair will take this occasion to remark that, in its opinion, the observations of members should be limited to existing provision for the insane, to the progress made in the course of the year in obtaining such additional accommodations as may be needed, and to the number of the insane in a state requiring the care of public institutions, together with the presentation of any cardinal principle or principles relating to the treatment of the insane, without going into the details of construction or management, which must be, to some extent, peculiar to each institution. The Association and the intelligent community will take it for granted that if additional provision is made for a hundred patients, it is a good one unless evidence is presented to the contrary.

Dr. BARNES, Illinois. Since Dr. Kilbourne has given all that is of interest, I will only add that we are progressing with the south wing and perhaps will be able to occupy it within the next few days. When the wing is completed we will have accommodations for two hundred and fifty more patients than now. We are moving on in our usual way.

Dr. KILBOURNE. Rev. F. H. Wines, Secretary of the Board of State Charities of Illinois, is present, and is thoroughly conversant with his work.

Rev. FRED. H. WINES. There is very little to be added to what has been said by our Superintendents. The State of Illinois is not an illiberal State, I think. The amount appropriated by the last General Assembly for the support of our charitable institutions for the next two years aggregate one million, five hundred thousand dollars. This is a large item, although when we consider the population of our State and the extent of its resources it is not so large as it at first seems. We have a population of about three millions, and an appropriation of one million five hundred thousand

dollars is equivalent to a contribution of about twenty-five cents a year from every person in the State for two years. As Dr. Kilbourne has said, we have two insane hospitals completed, at Jacksonville and at Elgin, and one in the course of completion at Anna. The Legislature has provided for four hundred and fifty additional patients by additions to the present hospitals, and the new Eastern Insane Hospital will give accommodation, probably, to four hundred and fifty more, so that by the time that Institution is completed we can care for nearly double our present number. In regard to the Eastern Hospital I wish to say that the Legislature appointed a special committee to report on the necessity for additional provision for the insane of the State, and that committee made a report which carried the measure. In their report they reopened the much vexed question of the adoption of the cottage, or village system of caring for the insane. They said: "We hope that the Trustees may be able to ascertain and demonstrate the feasibility of a reform in the mode of construction, by the adoption of the village plan of construction, with detached buildings erected at less expense, and affording a greater measure of comfort to the inmates." I have had a good deal of experience for eight years past in the visitation of State institutions, in laboring with Legislatures and with committees, and in visiting county jails and almshouses, and am well informed as to the sentiment of the State of Illinois; and there is no doubt that the people feel that the appropriations for their institutions are becoming rather an onerous tax upon them. They complain a good deal of the cost of the insane hospitals. Our hospitals at Elgin and at Anna cost each of them nearly or quite seven hundred and fifty thousand dollars for lands, building and furniture, which is equal to a cost of about fifteen hundred dollars for each patient provided for. The appropriations for the current support of our three hospitals will aggregate about one hundred thousand dollars each per annum, besides special appropriations; and the people feel that they are expensive to build and expensive to maintain. Their thoughts are running much on the question of cheapening the cost of taking care of the insane. We have not less than thirty-five hundred insane in our State to-day. When these four hospitals are equipped and running not more than two-thirds of our insane will be taken care of. There is already talk of erecting another hospital in the north-western part of the State. But to provide for thirty-five hundred insane, at an initial cost of fifteen hundred dollars for each patient, would involve an outlay of five millions two hundred and fifty

thousand dollars for this single object, and the people do not feel like standing it unless it is unavoidable. They will, of course, do cheerfully whatever has to be done; but they think that some measures ought to be taken to reduce this cost, if possible. I bring the matter up here for the purpose of eliciting a discussion by the Association on the cottage system, as that system will be pressed upon the Trustees for adoption.

With regard to the criminal insane there are many objections to their association with other patients; but our people have never come to the conclusion that it would pay to have a separate hospital for their benefit, because the number in Illinois is not large enough to justify the expense of such an institution.

We have passed through an investigation of the Elgin Hospital during the past year. A patient was unfortunately wounded by an attendant, and subsequently died, either from his wounds or from his disease, or from the medication employed, or from all three, and an investigation was desired by his friends. This was accordingly held by the State Board of Charities, and I am glad to say that the report of the Board completely exonerated Dr. Kilbourne, the Superintendent, from censure. The Board thought that the responsibility was attributable, if anywhere, to the attendant, who was dismissed, and the management was completely vindicated.

THE PRESIDENT. Was the attendant indicted?

MR. WINES. No, sir. The proof against him was not sufficient to warrant an indictment. He had a scuffle with the patient; broke his leg; and in twelve hours the patient was dead. No one witnessed the altercation except the patients in the ward, who could not give a connected account of it.

THE PRESIDENT. The Chair will inform the Association that there is a paper present prepared by Dr. Ray, treating of the cost of institutions for the insane, and suggests that, the discussion be postponed until that paper has been read.

DR. KEMPSTER, Wisconsin. We have been moving along very smoothly in Wisconsin since the last meeting of this Association. There is a very healthy feeling in our State towards the eleemosynary institutions, and as an index of that fact, I might state that a provisionary bill was introduced at the last session of the Legislature looking toward the erection of an additional institution for the accommodation of the insane now unprovided for in the State.

There are in the two Hospitals now in the State an aggregate of nine hundred patients, perhaps a few more, leaving to be provided

for about four hundred. With reference to the criminal insane the majority are kept in prison. There are a few in the Institution I represent and I believe there are some in the Institution at Mendota. An important question is being agitated just now, that is, what disposition shall be made of the so-called criminal insane? I am under the impression that the general feeling is, that suitable provision should be made in perhaps both Institutions, by constructing separate wards for their care. This class of the insane is with me a turbulent element and I do not feel that there is one of them who could be trusted as we trust other patients; some of them have made deadly attempts from time to time upon those by whom they are surrounded, patients and attendants.

I reported to this Association one year ago, the case of a woman who called at the house of one of the prominent physicians of the city of Milwaukee, rang the bell, and upon the physician answering the call, shot him down. The case is somewhat peculiar and has awakened considerable interest in this class of insane in our State. The woman was put upon trial and the jury found her guilty of murder. The judge remanded her to prison for sentence. In the meantime the same judge appointed a committee of two physicians to examine the woman with reference to her insanity. One of these physicians had testified upon the trial as to her insanity. The physicians certified that she was insane, and she was ordered to the Hospital at Oshkosh. While there she manifested the most undoubted evidences of insanity. She was not properly committed, however, and by direction of the Board of Trustees of our Hospital, she was returned to Milwaukee. She is homicidal and would take the life of a person if allowed. This case has given rise to considerable discussion of the subject of the care of the criminal insane, and the outcome I fear will be, as I have stated just now, the construction, at one or other of our Institutions and perhaps both, of a separate wing or building for the care of insane who have been convicted of breaches of law while insane. There are some in the State who would prefer the construction of suitable accommodations for this class at the State Prison, myself among the number; but the feeling is, I think, pretty generally settled that a building or ward should be connected with one or other of the State Hospitals for the care of this class. There is a very healthy public sentiment towards the State Hospitals. We have had no financial difficulties, no special trouble in securing appropriations. Each of the Institutions secured what was necessary for the care of the insane, and both of the Hospitals, so far as I am acquainted with their details, are flourishing.

Dr. BOUGHTON, Wisconsin. I have nothing of special interest to offer. During the last year or two it has been evident that in the matter of increased accommodations for the insane, the sentiment of the State of Wisconsin has pointed towards the erection of special cheap buildings for the chronic insane. If this is carried out it will interfere with the needed enlargement of the Institution at Madison. Our building is yet incomplete, the number of wards being too few for proper classification. The question was before our Legislature last winter, and probably the main cause why action was not taken, was because of local jealousies in different sections of the State. In regard to the criminal insane it may be interesting to know that the whole number of convicts in our penitentiary does not generally exceed two hundred and seventy-five, which is an exceedingly small number for a State of our population; so of course the number of insane criminals is very small. I am not aware that the Doctor speaks advisedly in regard to separate wards for the criminal insane at Madison. I think any such plan is unknown to our Board of Trustees, and therefore, has never been brought up. I should consider a separate ward for criminals a source of great annoyance and should advise strongly against it. We have in our Institution three or four criminals, but one of them has, however, been convicted and was first sent to the penitentiary; the others were saved from conviction on the ground of insanity.

Dr. CATLETT, Missouri. I have but little, sir, to say in relation to my Institution. I think it is fulfilling its mission to the satisfaction of all the citizens of the State who know anything of its management. The citizens of Missouri, I think, are disposed to be liberal to all the institutions of the State, and take care of all the insane that require it. We have nearly, if not entirely, sufficient accommodations for all the insane in the State, so far as I know. The State has annually appropriated twenty to twenty-five thousand dollars to the St. Louis Asylum, although it is not a State institution. Unfortunately, the appropriation made by the last General Assembly for this Institution was vetoed by the Governor on account of legal reasons.

As to the criminal insane the two State institutions have been relieved of the burden of taking care of them by the establishment of a very good hospital in the Penitentiary. We have in the State of Missouri about fourteen hundred criminals, and there are now in the Penitentiary four insane criminals. I speak of the Hospital as a good one, because I have examined it within the last day or two. So our institutions are relieved from the necessity of

taking care of them. The question of the care of the criminal insane will not come up in this State, on account of the provision made. Dr. Hinde, of Fulton, and Dr. Howard, of the St. Louis Asylum, are present, and can report for their institutions.

Dr. HINDE, Missouri. Mr. President, I am sure you will excuse my hesitancy in representing our State Asylum at Fulton, in the absence of our Superintendent, Dr. Smith. His letter to the Association will furnish satisfactory reasons for his absence from this meeting, at which it was especially desirable that he should be present, being the first held in Missouri, and he being one of the oldest members. My embarrassment is somewhat relieved, however, by the presence of Drs. Catlett, Howard, Bauduy, Stevens, Hazard, and Hughes, representing the specialty in our State. We have nothing new to report from Fulton. We stand about as reported a year ago. We keep filled to our utmost capacity. We had yesterday three hundred and sixty-nine patients, which is beyond the proper capacity of the building. The Institution, in all its appliances, is in better condition now, I think, than at any time in its past history. We are very nearly out of debt, and have liberal appropriations for running the next two years. We have a special appropriation for ground improvement, library, and amusements. We have a landscape gardener now employed, and expect greatly to improve our grounds this season. We have four insane criminals, two of whom are dangerous and require close watching. I think Dr. Catlett is mistaken in regard to any special provision having been made for them at Jefferson City. I have stated that the Legislature has been liberal toward us, and I can heartily sympathize with the Superintendent of the St. Louis Asylum, Dr. Howard, in view of the Governor's veto of the bill making an appropriation to that Asylum, thus leaving them without assistance from the State. We recognize the justness of the claim that St. Louis county is entitled to a fair representation in our State asylums, and we will accommodate them at Fulton to the extent of our ability.

Dr. STEVENS, Missouri. I would refrain from making any statement in relation to our County Insane Asylum. I know that many of my friends and acquaintances have come here with the impression that I am now its Superintendent. My recent appointment was only a temporary one. I supposed that Dr. Howard would be ready to make some report and sincerely hoped he would do so. Dr. Hinde alluded to certain financial matters, the fact of the Asylum not having the support of the State. It would

appear at first view as though an Institution like this, should be sustained and supported by the wealthy and populous county owning it. Heretofore or for several years, St. Louis county has claimed from the State an annual appropriation in return for a large amount of money derived from our county in support of the State asylums. St. Louis county pays by the general assessment, over fifty per cent. of the State revenue. This year the Legislature refused the appropriation. In consequence of this the Institution has had to suffer.

Dr. HOWARD, Missouri. It is with regret, Mr. President, that I have to state that the Institution under my charge is not in a favorable condition for inspection by the members of this Association. Many causes have conduced to this disagreeable state of affairs, the chief one being the fact that for several months we were in a condition very much resembling anarchy. There was a conflict between the city and county for the possession of the building; an armed mob collected around the house, and for several days it was protected by a corps of policemen. This force was soon withdrawn by the Mayor of the city to avert bloodshed, and the Asylum was surrendered to the county authorities pending the decision of the courts. The Superintendent appointed by the County Court was temporarily installed, but I continued under an agreement between the authorities to occupy my apartments. A decision was finally rendered in favor of the city, and the Institution, after much useless resistance and many unnecessary delays, was turned over to the Mayor and I was reinstated.

During this period of confusion which lasted nearly three months, the Asylum was not properly provided with supplies and, in consequence, its condition rapidly deteriorated. On taking charge, about five weeks ago, I discovered a most unsatisfactory state of affairs; the place was sadly in need of cleaning, many of the patients were extremely debilitated, clothing of all kinds was badly needed and scurvy had broken out. The general demoralization had affected the attendants, the best of whom had been discharged for doing their duty, and altogether the general outlook was gloomy in the extreme. The city authorities have, however, with a most commendable liberality provided the necessary funds, and I have done all in my power to bring the Institution up to a proper standard. I hope the gentlemen of the Association will be charitable in their judgments.

Dr. BUCKE, Ontario. I am very sorry, Mr. President, that neither of the two older Superintendents from Ontario are present,

they would have been able to speak upon the subject much better and more fully than myself. You know that I have not been long engaged in the specialty. Dr. Clarke is on the way and I thought he would have been here before this time. Dr. Dickson, I believe, will not attend the meeting this year. I am not able to speak about any part of the Dominion except Ontario, and my knowledge even in this field is chiefly confined to my own Asylum. The accommodation for the insane in Ontario amounts now to about eighteen hundred beds, about four hundred in Kingston, a little over six hundred at each of the Asylums at Toronto and London and two hundred at Hamilton. The population of Ontario is something like a million and three-quarters; therefore, we have accommodation for about one patient in every thousand of our population. We have almost, but not quite, sufficient accommodation for all the insane of the Province, and at Hamilton and London we are erecting additional buildings which will increase our accommodation from eighteen hundred to something over twenty-three hundred beds. When these buildings are completed, as they will be next year, we shall have accommodation for all the insane of the Province, and several hundred beds to spare—so that at the rate of increase of our population and of this unfortunate class in the past, we shall have room for our insane for several years to come.

In my own Asylum at London we have three hundred and two beds for females, and three hundred and thirty-two beds for males. The reason of this difference is that an old building which used to be occupied by the idiotic is now turned into a cottage for quiet male patients. This gives us room for all the male patients who apply for admission, but at present we have some twenty or thirty female applications on file, this side of the building being quite full. There is one feature in the London Asylum different from most asylums on this continent. We are introducing the cottage system in connection with the large Asylum. Our Asylum when finished, as I expect it will be next year, will consist of, (1) a Central Asylum with a capacity of five hundred and forty-four beds, (2) a Refractory Asylum with one hundred and forty beds, (3) three cottages containing sixty beds each. In every instance half of the building is for males and half for females. We shall, therefore, have a total capacity of eight hundred and sixty-four beds. The cottages are all built on the same plan, they each have two wings and a center building, the wings are two stories high, and the center building has an attic in addition, and under part of it is a cellar. The center building is divided

throughout by a partition through which there are no passages except through the kitchen part of the house, and the attendants rooms are above the kitchen, so that half the center building belongs to the male side of the house, and half to the female side. In each half of the center building are two good sized rooms, one up-stairs and one down, which are used both as dining and sitting-rooms. Behind these rooms are the kitchen and scullery below stairs, and a bedroom and sitting-room for the male and female attendants, who are man and wife, up-stairs. A housemaid, these two attendants and the sixty patients complete the household. The wings of the cottages have two flats; the two flats and the two wings exactly correspond to one another. In each flat of each wing are three dormitories, one of eight, one of four and one of three beds. One such cottage as I describe containing sixty beds has been in occupation for three years. The others we expect to get into this autumn. So far this cottage system has been in every sense a complete success, the patients like it exceedingly, so that if they misbehave, as they very rarely do, a threat to remove them to the main building has a powerful effect on them, and actual removal, in extreme cases, for a few weeks will bring the most refractory of them to order.

The cost to build these cottages is low, one hundred and sixteen dollars per patient, and the cost of maintenance is less than at the large Asylum, because the number of patients to an attendant is greater. The cottages are intended for quiet, incurable patients, but not of course for cases of hopeless dementia. Most of the patients in our present cottages work every day.

As to the isolated refractory Asylum I shall be better able to speak about that after it is opened. It will be some three hundred yards from the main building. I am aware that great objections may be urged against this splitting of the Asylum in halves, as it were. I believe it will also be found to have its advantages. Nothing but a practical trial can settle the question, as to which of these, the difficulties or advantages, outweighs the other. I hope at some future day to tell you the result of the trial.

Dr. WALLACE, Ontario. Mr. President and Gentlemen, I have much pleasure in being present for the ¹first time at a meeting of this Association. Having but recently engaged in this specialty, and having a very short practical experience in the management and treatment of the insane, I feel that I can not too highly appreciate the privilege of meeting the members of this Association, and by being an eager and attentive listener, learn all I can relating

to the important subject of insanity. The Asylum at Hamilton was originally intended for the accommodation and treatment of the inebriates, and the buildings were nearly completed for that purpose, when it became evident that the demand for accommodations for the insane was very much more pressing than for inebriates. The government decided to convert the buildings into an asylum for the reception of chronic and incurable cases of insanity, and as soon as they were completed they were filled to their capacity of a little over two hundred with chronic cases, transferred from the overcrowded asylums of the Province. It is found that the Asylum accommodation is still inadequate to the demand, but in a few weeks will be commenced the erection of two wings and a rear extension to the present buildings, which when completed will increase the capacity of the Asylum to five hundred and fifty. This Asylum will then be placed on the same footing as the other asylums of the Province, that is, a section of the Province will be allotted to it, from which it will admit its patients on medical certificates, and Lieutenant-governor's warrants, instead of, as at present, receiving its inmates as transfers from the other asylums.

The government of Ontario has a very praiseworthy desire to be abreast of the demand in the provision of proper accommodations for the insane of the Province, and with a view to that end, has purchased from the government of the Dominion, Beechwood Asylum, at Kingston, and will proceed at once to increase its capacity from three hundred and seventy to five hundred. A new wing for refractory cases, and two cottages for incurables, are being added to the Asylum at London. When all these additions have been completed the Province of Ontario, with a population of two millions, will have asylum accommodation for at least two thousand six hundred, and it is hoped that the supply will be abreast of the demand for accommodations for the insane, for some years to come.

The PRESIDENT. If there is any member present who has not been called in this discussion, the Association will be glad to hear his views upon the subject under consideration.

Nothing further having been offered, Dr. Nichols said:

With the permission of the Association I desire to submit a few words in regard to the management of what are usually called the criminal insane. The resolutions passed upon this subject in 1873 are as follows :

“Whereas, the President of the Board of Public Charities of Pennsylvania has requested that this Association should express its opinion in regard to the proper disposition of insane convicts, it is therefore

Resolved, That neither the cells of penitentiaries and jails, nor the wards of ordinary hospitals for the insane, are proper places for the custody and treatment of this class of the insane.

Resolved, That when the number of this class in any State, (or in any two or more adjoining States, which will unite in the project) is sufficient to justify such a course, these cases should be placed in a hospital specially provided for the purpose; and that until this can be done they should be treated in a hospital connected with some prison, and not in the wards, or in separate buildings upon any part of the grounds of an ordinary hospital for the insane.”

It seems to me that my brethren will bear me out in claiming that I am generally thoroughly loyal to the formal declarations of this Association, but I have never been altogether satisfied with those resolutions, not that I do not agree in the main with what they do declare, but they do not seem to me to so amplify the principles which should govern in the management of the different classes of the insane who have committed criminal acts, as to afford a guide to legislators and other publicists in providing for each class, and that they do propose a solution of the problem that will prove impracticable in many cases, and is therefore not likely to be carried into general effect. It should be clearly understood what classes of persons are embraced under the general designation of the *criminal insane*. Insane persons who have committed criminal acts may be divided into three classes: 1st, those who have been convicted of criminal acts, and while undergoing punishment therefor became insane; 2d, those who have been indicted for criminal acts, and are, on trial, acquitted on the ground of insanity; 3d, those who have committed criminal acts in such obvious conditions of insanity as to lead to their being sent to institutions for the insane without trial. The first class is largely, not exclusively, composed of persons that belong to what are called the vicious classes; their birth, education (or rather the want of it) and associations have been most unfavorable to proper moral development, and their insanity is often the cumulative result of a life of dissipation and vice. We all agree without doubt that in the language of the first resolution “the wards of ordinary hospitals for the insane” are not proper places for the treatment of such patients. Every proper sensibility revolts at the idea of placing

such hardened criminals as most of the insane of this description are, with what may, for convenience, be called the innocent insane, which embrace in our public institutions many people of the highest character and most refined sensibilities; neither is it compatible with their proper treatment as such persons, or with the health and comfort of their fellow-prisoners, that they should be kept in "the cells of penitentiaries." Then these persons who have been indicted, and acquitted on the ground of insanity, belong largely, but less exclusively than the first class, to the vicious classes, and the association of many of them with the innocent or ordinary insane is, as in the case cited by Dr. Kempster, utterly repugnant to our ideas of propriety. That their insanity preceded the criminal acts for which they were indicted and tried was purely accidental. There was a proclivity both to disease and vice. On the other hand, some well-balanced and virtuous persons become insane from one or more of the physical or moral causes of mental disease to which the best of men are exposed, and sometimes succumb, and are driven by their insanity to the commission of criminal acts, for which they are indicted, tried, and acquitted, as aforesaid; and if the criminal act have been a homicide such a patient ought not, it seems to me, to be associated either with the first class or with the ordinary insane. Finally, there is the third and last class of the criminal insane, those who are known to be insane before the commission of a criminal act, or upon the commission of the act are seen to be too insane for trial, and are sent to institutions for the insane. Fewer of this class have led vicious lives than of the second, and fewer still than of the first, but, like the second, some are not fit associates of the inmates of the penitentiary asylum, and others, especially homicides, are not fit associates of the ordinary insane. Our State institutions provide especially for such of the insane as have not the means to provide for themselves. They can not go anywhere else, and embrace some of the very best people in the community, and it seems to me that they should not be compelled by the double misfortune of loss of reason and indigence or poverty, to lie down and rise up, eat and drink, work and worship in close companionship with those who have been so unfortunate as to have committed homicide, or other flagrant criminal act, especially if their whole lives have been vicious, and their society repugnant and contaminating. Any gentleman I address may be compelled to send his wife or his daughter, in case she should become insane, to a State, or other public institution, and I am sure that there is no gentleman present who would be willing

to have his wife or daughter closely associated with a woman who had committed a homicide, though legally excusable because insanity existed prior to the killing, and it seems to me scarcely less than cruelly oppressive to compel a lady or gentlemen to submit to such association because of lack of means to pay for treatment in a corporate or private institution. Now, what is obviously wanted is a scheme that will, in general, fairly meet the obligations of society to all insane persons who have committed criminal acts; that is practicable to attain under all circumstances; that admits of such variety of adoption as to render it applicable to the proper treatment of the second and third classes, into which I have divided these people, and that properly protects the ordinary insane. The great question is, what shall it be. The great States of New York and Pennsylvania, and perhaps some others that have two or more large State penitentiaries, should each provide a separate institution, to which all their insane criminals (those of the first class) should be sent and properly cared for, as required by the resolutions. Two or more of the smaller States, each of which has but few insane criminals, are not likely to unite in establishing and maintaining such an institution for their common benefit; and the best practicable plan of providing for the cases of insanity that arise in their penitentiaries, is to establish and maintain an insane department of the prison hospital, to be under the charge of the prison physician. It may consist of one or more wards for each sex, according to the requirements of each prison. The number of insane in each prison is generally quite small, and one insane ward for each sex will, in most instances, be sufficient.

Dr. WALKER. Suppose there is not room?

The PRESIDENT. If there is not room there ought to be, and it should be obtained, just as any lacking requirement of the establishment should be supplied. Having provided for insane criminals, what shall be done with insane that have committed criminal acts, but have not been tried for them, or if tried, not convicted or sentenced to punishment, and that are usually sent to the State institutions. I have given this subject much thought, and it seems to me that the obligations of society to all parties concerned will be best fulfilled by having entirely separate wards, generally in a separate building, as a department of each State and large municipal institution for the insane, for the care of such patients as are now under consideration. It may be asked will not this plan be attended with hardship in some cases; for instance, a pious mother having been seized with melancholia, and destroyed her

child in consequence, may have been tried and acquitted on the ground of insanity, and sent to a State hospital for the insane, and it may be thought hard to keep her all her life, or during the continuance of her disorder, in the exclusive society of insane persons who have committed criminal acts, the lives of some of whom have been more or less depraved. The answer is, I think, that the plan proposed for the convicted classes has a practicable flexibility, by which it may be adapted to the requirements of peculiar cases. Such a person as I have just described may be taken into a ward with the ordinary insane if her refinement and prudence are such that she would give no just offence to her associates on such a ward. If she should first be sent to an institution for insane criminals, such relief would generally be impracticable, and without the express and separate provision for the unconvicted classes that I have suggested, the ordinary insane are liable to have the most unfit, if not injurious, associates. It seems that in Massachusetts substantially the provision for the insane convicts that I have suggested is being made in connection with a large penitentiary now building, and that in Wisconsin, and perhaps in one or two other States, wards connected with the State institutions are being provided for the separate care of patients who have committed criminal acts. In favoring the scheme of providing for the criminal insane, which I have briefly described, it may be claimed that it will cost less than any other mode of treating them, entirely separate from the ordinary insane, a consideration that is likely to give it favor with the public, and I know of no practicable objection to it that does not apply with greater force to the plan of the resolutions, or any other plan that has been suggested to me. To carry it into effect involves some additions to the material provisions, and some changes in the administration, both of public institutions for the insane, and penitentiary hospitals, but they can rarely be impracticable, and can never be of great cost; and if such additions and changes are needed, and sufficient to the end sought, they should be advocated until they are attained.

DR. CHIPLEY. What would you do with the other class, the class not found to be insane at all, but acquitted on the ground of insanity? It has been clear to my mind that some have not been insane at all.

THE PRESIDENT. Unless such persons have been acquitted on our testimony, we have no responsibility in relation to them, no more than we have in relation to other rascals who manage to get

unjustly acquitted of criminal acts by any of the subterfuges of lawyers, or otherwise. The courts are responsible for such cases, not we.

Dr. CAMDEN. Can you make any disposition of the criminal insane in the District of Columbia? The reason I ask is that we have a government insane person that we want to get rid of.

The PRESIDENT. When the law organizing the Government Hospital for the Insane was passed, there was a United States penitentiary in the District, and provision was made for the admission of insane convicts from that prison, provided that in the judgment of the Superintendent of the Hospital and physician of the penitentiary a case was not too depraved and dangerous for treatment in the former institution. The act making this provision was passed in 1857, twenty years ago, and you will see that it carries into practical effect the views I have imperfectly set forth.

Dr. CAMDEN. Have you any means of ridding us of the patient to whom I refer, he is in our State prison, and a non-resident, and we would like to send him home?

The PRESIDENT. There is a provision of law under which it is discretionary with the Secretary of the Interior, to admit to the Hospital insane criminals, convicted in United States Courts, or decline to admit them. That officer has twice declined to admit the case referred to by Dr. Sawyer, a United States convict in the Rhode Island penitentiary, on account of the crowded state of the Hospital, and for the same reason I do not suppose that he would admit the prisoner referred to by Dr. Camden. Since the breaking out of the late war the government has maintained the District criminals in the Albany, N. Y., Penitentiary, and when any of them become insane I presume they are placed in the Auburn Asylum under Dr. MacDonald.

Dr. GUNDRY. With your permission I will say a few words. I shall not dispose of the problem as easily as you have done, the question of room. The facts are that in the Ohio penitentiary we have eighteen hundred prisoners, and while they are building a wing to receive four hundred, we have no place for making the accommodations for these persons of whom you speak. There are forty-five, or over, that I believe to be insane. They are all kept in what I call cages; they fortunately have ventilation, but they are within the sight of the other convicts. Now as to building an additional hospital. The present hospital is already occupied by the sick people of that penitentiary; there is not room enough within the walls, and outside the walls there is not a foot of ground

near the penitentiary that could be used, because that ground is used by private parties and railroads, so that what you recommend is practically impossible. Now comes the practical question submitted to this Association. I have my own views. Of course the proper way is to build a proper hospital for these people, a building to be separate for criminal persons who become insane. Here are persons who have actual insanity, fifty-five persons, besides others who mingle with the insane but who have not done such acts as to warrant the authorities to separate them from their companions.

The PRESIDENT. It seems to me that the alternative would be to go away to another site.

Dr. GUNDRY. I confess I think it would be a great deal better to bring them into a hospital at once than to have them where they are. They are not abandoned men, and if they can not make suitable and proper provision in a proper place, I think it would be better to take them into our wards and care for them there, and then have the State make provision for them. This would be better than to keep them where they are.

The PRESIDENT. I am afraid if they should be put into our institutions the public would say, they are being too well cared for.

Dr. GUNDRY. That is true, but when the pressure came from other persons there would be a change. Now they excite little sympathy. We should have, then, the pressure from the other side on account of occupying somebody else's room. Now they are out of sight, and I may say nobody cares for them, I think I will bring them into the light of public opinion, but I think I shall not, for the time being, go averse to the rules of this Association.

Dr. WALKER. Of course this Association can at present lay down only general rules, for we can not dispose of every accidental case that may come up. The Association has published its declaration of what, in its opinion, is suitable accommodation for such a class of criminals, for such persons as have been referred to by Dr. Gundry. If it is utterly impossible for the State of Ohio to provide for them under the present circumstances, of course it is for the State of Ohio to do the best it can. I suppose there can be no difference of principles in the Association.

What I wanted to say is, I think there is a misconception, Mr. President, in your view of the scope of the resolutions. It is headed "care for insane criminals," and if I recollect aright, this question was raised to meet the views of a number of superintendents on transferring six or eight, or a dozen, insane criminals

from prisons into State Hospitals. I know it was particularly complained of that these old convicts who, during prison life, had become insane, were sent for permanent care to the State Hospitals. I do not think that these resolutions contemplated these cases on the border land, or freshly insane who commit violent acts either against life or property. I think the resolutions attempted to declare the views of this Association as to what are declared truly insane criminals, and not the criminal insane, and that we do not undertake to provide for the other classes at all, but that is for this Association yet to do. I think this is intended to meet the demand of these superintendents who protested against having their wards filled with criminals from State prisons.

Dr. HUGHES. There has never been a doubt in my mind regarding the scope and purpose of that resolution, though I had not the pleasure of meeting with the Association at the session at which the resolution was adopted. It has never occurred to me that gentlemen at all practically familiar with the question of insanity would class among the criminal insane those who, by reason of mental infirmity, have committed acts in violation of law. With insane men who do acts in violation of law the question of responsibility is held suspended until their mental state is established, if the question of mental competency be raised. An insane man can not be held criminal for acts done in consequence of mental disease. If it were contemplated to include the innocent and criminal insane together, I apprehend that this Association would not adopt such a resolution with unanimity. The inherently depraved, whose insanity is the legitimate product of a life of criminality in themselves or their ancestry, can not be scientifically classed with such as have only the appearance of criminality, consequent upon disease, and who, in their best mental estate, when their faculties were sound, never transgressed the law. The wife who, in a fit of melancholia, destroys her offspring, imagining it unfit to live, or the son or brother who, under some other delusion, becomes a patricide or fratricide, are not criminal, though a jury may so regard them, any more than the pyremaniac who burns down his dwelling to dislodge an imaginary devil. These are not the criminal insane, though they do things after their insanity which criminals do before mental overthrow.

On motion, the Association adjourned to 8 P. M.

MAY 29, 1877.

The Association was called to order at 8 p. m., by the President.

Dr. Curwen introduced to the Association Dr. Wm. Corson and Gen. James A. Beaver, Commissioners of the State Hospital for the Insane, at Warren, Pa.

The Secretary read a biographical sketch of Dr. Henry Landor, deceased, prepared by Dr. Stephen Lett.

Gentlemen: Since the last meeting of your Association you have to deplore the removal from your midst, by death, of your former respected colleague, Dr. Henry Landor, late medical Superintendent of the Asylum for Insane at London, Ontario. Dr. Landor's genial presence at the annual gatherings, for a number of years past, many of you will doubtless well remember. The sad event of his death took place at his residence, contiguous to the Asylum at London, on the sixth of January, last, after a brief illness.

The following cursory biographical sketch of the career of your late friend and associate will not, I trust, be unacceptable. Dr. Landor was a descendant of an old English family whose name became historical through the literary genius and works of the celebrated Walter Savage Landor, of whom the subject of your notice was a cousin. Dr. Landor was born in the Island of Anglesey, in the Welsh principality, in the year 1815. He spent his early boyhood in Liverpool, where he received his scholastic training under the care of Dr. Prince, a teacher of some reputation at that period, through whose hands passed many men of note, some of whom have attained to deserved reputation and eminence as statesmen, amongst these prominently stands the Right Honorable W. E. Gladstone, who is still, as he has long been, an able and distinguished member of the English House of Commons. When Dr. Landor left school at Liverpool, he was sent to Stockport, in the county of Chester, where he became an articled pupil to Mr. Richard Flint, surgeon to the Stockport Infirmary, and after a creditable course of study and discipline here, he proceeded to London and continued his studies with assiduity and success at the Aldersgate School of Medicine. From this Institution he graduated in the session of 1835-36, carrying away, not only cer-

tificates of honor, but also the silver medal awarded in the class of surgery, then under the professorship of the renowned Dr. Frederick Skey.

In the year 1837 Dr. Landor was admitted a member of the Royal College of Surgeons, England, and licentiate of the Society of Apothecaries, London. He now spent some time in walking the hospitals, after which he settled in private practice, until 1841, when he received the appointment and was sent out as Stipendiary Magistrate to Australia. After a residence of six years in the colony, he returned to England, bringing back with him from the then Lieutenant-governor, Sir W. Winneet, the highest testimonials as to conduct and capacity. In a short time Dr. Landor again received an appointment as Colonial Surgeon to the British Forts on the Gold Coast of Africa, whither he proceeded in the year 1847. Scarcely had he been there two years before he became a victim to the malarious fever incident to that country, and he was obliged precipitately to leave and seek his native climate. He was carried on board ship in a state of insensibility, and with apparently little hope of survival, and he reached England in a painfully debilitated condition, early in 1849. The invigorating change of climate, in conjunction with a return to his old habits of life, gradually restored him to his wonted health and strength. During his convalescence, at this period, he wrote a pamphlet, entitled "The only way to stop the Slave Trade," which was favorably received by the public, and had a large circulation.

Having entirely recovered his health he now entered upon the study of insanity, with the view of making it a professional specialty, and in the year 1850, in association with the late Dr. Donald Dalrymple, M. P., Dr. Landor became resident physician to the Higham Retreat (private Asylum) at Norwich, county of Norfolk. Here he remained for nearly ten years, pursuing his specialty, and engaged in various scientific studies, notably geology and chemistry, and contributed occasional articles to the press. During this time he contributed to the Proceedings of the Royal Geographical Society of London, a paper on the probable condition of the interior of Australia. In 1859 he was admitted a member of the Royal College of Physicians, Edinburgh. Upon leaving Norwich Dr. Landor went to Southsea, again entering general practice, but being desirous of seeing more of the world he did not remain long there. He came to Canada in the fall of 1860, and settled in London, Canada West, now the province of Ontario, commencing a private general practice, and continuing therein

until 1868, when he received the appointment of Medical Superintendent of the Malden Lunatic Asylum, Amherstburg, Ontario, an institution which through neglect and inefficient management had fallen into culpable disorder. Here Dr. Landor at once evinced his eminent fitness for the work devolving upon him—the thorough reorganization. Knowing well what was needed, and being a shrewd judge of character, he soon gathered around him persons well adapted to this special calling, and in an incredibly short time the whole establishment was placed in as effective working order as the nature of his material—buildings ill-calculated for the purpose—would admit of.

Two years later, when the Malden Asylum was closed, and the new buildings at London were ready for the reception of patients, the government of the day recognizing Dr. Landor's distinguished qualifications for asylum work, as well in organization and administration as in strictly professional skill, the authorities were pleased to intrust to him the superintendency of the new Asylum at London, and hither Dr. Landor removed in the fall of 1870, filling the office most efficiently, and with the highest satisfaction to the government and the public, up to the time of his lamented decease. The admirable order, discipline and working condition in which he left the Institution bear ample testimony to the zeal and fidelity of his unremitting care and labors. *Si monumentum quæris circumspice.* Dr. Landor was a true, though unostentatious philanthropist. His constant aim appeared to be the good of his fellow creatures. Endowed by nature with more than average mental ability, having had the advantages of a good professional training, a close thinker and shrewd observer who had enjoyed a wide field of observation, he was accustomed, as he was well able, to form his own opinion, and was always ready to give a reason for the faith that was in him. His judgment was generally sound, and his actions had as little of the alloy of selfishness as those of most men. He was a firm believer in the solid graces of good works from worthy motives, regarding these as the only evidences of Christian character, and this doctrine he always endeavored to exemplify in his daily life and work.

As regards asylum management and the treatment of the insane, Dr. Landor was a strong advocate of *non-restraint*. It was his conviction that, with intelligent, properly trained attendants and due supervision, in a well appointed and not overcrowded asylum, with all its arrangements judiciously adapted to its occupants, the cases in which restraint, either mechanical or chemical, is necessary,

are very few indeed. He had but little faith in the curative power of any special medical treatment, but looked rather to hygiene and nourishment for the restoration of the *mens sana in corpore sano*, where such restoration was possible.

Dr. Landor's late ambition was to test the treatment of the chronic, harmless insane in cottage residences, possessing as much as possible the characteristics of a home, situated on the grounds and being under the same superintendence as the main asylum. In this, his desire, he so far succeeded as to have erected on the premises of the London Asylum, a group of three buildings, containing in the aggregate sixty patients, viz. : thirty males and thirty females, and although by reason of the limitation of pecuniary means, the Doctor was unable to carry out fully his ideas, he had nevertheless, the great satisfaction of seeing his scheme in operation for two years and upwards, under tolerably fair conditions, and attended with a degree of success extremely gratifying to him, if not exceeding indeed, his high expectations. Dr. Landor's long and beneficial service in the special branch of our profession, to which he had so successfully devoted himself—his superior intellect, his extensive knowledge and varied acquirements had justly gained him high respect, while his frankness of disposition and genuine kindness of heart, endeared him greatly to those with whom he was personally associated, even to the humblest of his subordinates.

As many of you will probably remember Dr. Landor attended the meeting of the Association at Staunton, Virginia, in 1869, and at Toronto, Canada, in 1871, on which latter occasion he had the pleasure of conducting the members—doubtless some of you now present—to London, entertaining them in the Asylum there, which at that time had but recently been opened. He was present also at Madison, Wisconsin, in 1872, and in Baltimore in 1873. The following year, 1874, he denied himself the pleasure of meeting the Association at Nashville, Tennessee, in order that his assistant, Dr. Lett, might enjoy that privilege. The last meeting at which your associate, the late Dr. Landor, was present was that held at Auburn, N. Y. in 1875. Last year, (1876) failing health rendered it necessary for him to rest from his duties, and he was hence debarred the pleasure of meeting you in Philadelphia. During Dr. Landor's attendances at the meetings he contributed to the proceedings of the Association two papers, the first being on "Insanity in relation to law," read at the meeting in Canada in 1871; and the other on "Hysteria contrasted with Mania," read at Baltimore

in 1873. He also published in the *AMERICAN JOURNAL OF INSANITY* his views and experiences upon the practice of sending out patients on probation.

Dr. Landor labored under that fatal form of disease, diabetes mellitus, of which he became cognizant some five years ago. At this time it appeared to be making inroad upon his previously vigorous constitution. Rest, however, from mental strain, and change of scene seemed to check its progress, and for some time he apparently suffered but little inconvenience. During the winter of 1875-76 symptoms of failure again appeared, and when spring opened (last year) it was found desirable again to have change of air and scene, in conjunction with rest; and now resort was had to the sea coast of Virginia, Old Point Comfort, where the Doctor remained for some weeks with much benefit. Returning to his duties with renewed vigor, he efficiently administered the affairs of the Asylum until last December, when he was again so prostrated as to have to take to his bed. He now felt convinced that his final struggle was approaching. His mind was still, however, in his work, and though unable to raise himself in bed he anxiously continued to give directions for the well-being of those under his charge. Only a few days before he lost consciousness (from coma) and at a time when he knew and felt death steadily drawing nigh, he wrote a most urgent letter to the government calling its attention to the necessity for further provision for the insane. After this he rapidly sank, expiring on the sixth day of January, A. D. 1877, in the sixty-second year of his age, leaving a sorrowing widow and eight children to mourn their irreparable loss. Your departed colleague was a good husband and father, a warm and sincere friend, and a conscientious and faithful public officer.

On motion it was resolved that the memoir of Dr. Landor be printed in the proceedings of the Association.

Dr. GUNDRY. Mr. President, if you will allow me, I have a subject to bring up at this time. It is in regard to an occurrence which has happened since our meeting last year. You will all remember that at the meeting last year we were cheered by the presence and the few words given to us by our venerable friend, Dr. William M. Awl. It seems to me a sad affliction that at the first meeting west of the Mississippi this Association should have announced to it the decease of the psychological pioneer west of

the Alleghanies. Dr. Awl died, I think, in January of the present year, and I therefore move that such steps be taken by the Association as will test the sense of our loss of this beloved man. I may add that I should have been prepared, probably, with a memoir, though I understand from a friend that it was in our hands, and would be delivered here.

The motion of Dr. Gundry was agreed to.

Dr. McFARLAND. While on the subject of Dr. Awl, I will state in explanation of a remark made by Dr. Gundry, that I wrote to Dr. Awl's daughter during the winter, stating that I proposed to present at this meeting some reminiscences of older members, which I accordingly prepared. Miss Awl forwarded me a sketch which I have not with me. It was not precisely what my purpose required, as my paper was not intended to be biographical as she conceived. I embodied only such portions as I found would serve my purpose; but the paper I have does not answer the scope of Dr. Gundry's design, which is eminently a proper one. As already remarked, I have a paper in which a sketch of Dr. Awl, as well as other members of the Association, will enter.

The President appointed as the committee to prepare a memoir of Dr. William M. Awl: Drs. Gundry, McFarland and Kirkbride.

Dr. John B. Chapin, from the committee appointed at the last meeting of the Association, to prepare a memorial of Dr. George Cook, read the following, which was ordered to be entered in the proceedings of the Association.

It has been an honored custom of this Association to place in its archives a memorial of the life and services of its deceased members, as an honorable tribute to their memberships of this body, to perpetuate their virtues, and that their survivors and successors may emulate their excellent qualities.

Dr. George Cook was born in Cayuga, a village on Cayuga Lake, in the State of New York, in November, 1824. After receiving such an education as the local academy afforded, he entered upon the study of medicine in the office of Dr. Shaw, of Cayuga. He received his degree of Doctor of Medicine from the Geneva Medical College in 1846. By the advice of Dr. C. B. Cov-

entry, one of the Professors of the College, and one of the managers of the State Lunatic Asylum at Utica, then under the superintendence of Dr. Brigham, he was appointed an assistant physician in June, 1848. On the death of Dr. Brigham, in 1849, he became the acting Superintendent, and made the Seventh Annual Report of that Asylum. A portion of the years 1853 and 1854 he spent abroad, in attendance upon general hospitals and asylums for the insane.

In 1855, Dr. Cook removed from Utica to Canandaigua, and set about the establishment of a private hospital for the insane, which was afterward incorporated under the name of Brigham Hall. The creation and administration of this Institution was his life-work. During the twenty-one years he was connected with Brigham Hall he treated more than one thousand patients. This Hospital stands to-day a monument of his life-work, and of an amount of self-denying, untiring labor rarely witnessed in human experience. Dr. Cook made several contributions to our medical literature, among them papers on "Mental Hygiene," on "Inebriety," "Notes on European Asylums," "Provision for the Chronic Insane," in which subject he was deeply interested, and with which he was most prominently identified, on the condition called "Transitory Mania," and on other topics.

As a citizen he was called to fill many responsible positions. He was a Trustee of the Canandaigua Academy, of the Ontario Female Seminary, and of the Ontario Orphan Asylum. He was twice elected President of the village of Canandaigua. On the organization of the National Bank of Canandaigua he was elected its first President. He was elected supervisor of his township and afterwards to the State Legislature. He served his fellow citizens in many positions of an honorable and fiduciary capacity.

Dr. Cook was a person of decided religious convictions, he was a member of the Congregational church in which he co-operated in various offices with his pastor. He had charge of a Bible-class composed of young men, and found time during the week amid the pressure of other duties to make careful preparations for his Sunday's work. As a physician in the management of all the delicate relations which pertain to the insane and to hospitals for the insane; as a citizen of the community in which he lived, and, as a Christian, he discharged every obligation to the fullest measure of his capacity and strength, without ostentation, conscientiously and from conviction. His life may be said to have been passed in the service of, and for the benefit of others. To the majority of this Associa-

tion Dr. Cook may have been personally unknown, yet the commencement of his service with the insane, dates with that of the oldest members of this body.

It was the fortune of one member of the Committee to hold intimate personal relations of various kinds with Dr. Cook, for a period of twenty-two years; and I here bear record to his high-toned principles, his gentleness, his unimpeachable integrity, and his unswerving devotion to his convictions when formed. He was free from ostentation, apparently of a cold exterior, reticent in manner, possessed of extraordinary resolution, and a degree of calmness and self-control beyond that which ordinarily falls to the lot of men. Of the circumstances of his sad and sudden end by the hand of one of his patients, which occurred on the twelfth of June, 1876, while in personal professional attendance upon him it is not proposed to allude, except to record the fact. Neither are we to believe that sudden death would have been an unwelcome issue if it had been given to our brother to have contemplated the certainty of such an event, yea, we are rather to believe that this one of his prayers was certainly answered. In the last communication with his pastor a few days only before his death, he referred to the uncertainty of life and his preparation for death, and expressed his hope and prayer that when the summons came it might be sudden.

The Committee recommend that the following resolution be ordered to be entered upon the records of this meeting of the Association.

Resolved, 1st. That this Association recognizes in the sudden death of Dr. George Cook, the agency of a mysterious Providence, by which it has been deprived of the membership of one whose entire professional life of thirty years was devoted to the care of the insane, and of one who adorned and honored the profession of his choice in the various relations he held to the community in which he lived, and whose life was ended in the performance of his active professional duties.

Resolved, 2d. That this Association here records its appreciation of all those higher qualities of mind and heart which actuated our deceased associate, and with which he was so richly endowed.

Resolved, 3d. That the Secretary be requested to express to the family the sympathy which we entertain for them in their bereavement, and the loss which this Association has sustained in the death of Dr. Cook.

On motion, the resolutions were unanimously adopted.

Dr. McFARLAND. Gentlemen of the Association, quite to my surprise I find myself at this meeting of the Association the senior in date of membership of any present, and hence there seems an unexpected fitness in the title of my paper, "Association, Reminiscences and Reflections."*

Dr. McFarland then read the paper.

Dr. WALKER. Mr. President, I rise to say, sir, simply that a paper of that description hardly admits of discussion in this Association. Still it is perfectly appropriate that we should express our full approbation of such a happy description of those who once occupied the positions made eminent by their having filled them. The paper gives to us the reality of the eminence of those who have gone before us. It has been a long day since I have listened with so much delight to a paper read to this Association. It was not my good fortune to know all the characters mentioned, But so far as my knowledge, and observation, and acquaintance extend, I must express my highest delight at the care and discrimination by which these characters have been drawn and presented to us this evening. I believe, sir, when this paper is printed and placed in our hands, it will do a great deal toward arousing among the later members of the old Association that strong attachment which originated with its earliest founders. It has given to us not only a vivid and accurate account of the object for which this Association was founded, of the objects steadily kept in view by the original members during the first and most important years of its existence, and what the earlier members had to contend with, but it has also given to us, who did not know them, a most capital and vivid picture of their personality; and one can readily see, from the word-painting of their characters, how much they endeared themselves to their associates, and all brought into contact with them. I rise simply to express my gratitude to Dr. McFarland for the labor of love towards those with whom he was so long connected, and to move that it be printed among the proceedings of the Association, and that the hearty thanks of the Association be extended to him for the infinite entertainment he has given us this evening.

The motion was unanimously agreed to.

The minutes of the proceedings of the day were then read and, on motion, the Association adjourned to 10 A. M.

* Will appear in the January number of this JOURNAL.

MAY 30, 1877.

The Association was called to order at 10 A. M., by the President.

Dr. Kempster, from the committee to prepare a memorial of Dr. A. S. McDill, read the following biographical sketch :

Alexander S. McDill, M. D., was born in Crawford county, Pennsylvania, March 18, 1822 ; he was educated at Allegheny College, studied medicine and received his diploma at the Cleveland Medical College. After some years of professional labor in his native State, he removed to Wisconsin, where he soon acquired many friends by his cordiality and friendly disposition. In 1862 he represented his district in the State Legislature, and in 1863-4, he was a member of the State Senate. In his capacity as a legislator he soon became eminent and he wielded great influence in the bodies to which he was elected.

In 1862 he was appointed a Trustee of the Wisconsin State Hospital, and here too he manifested a lively interest in all that pertained to the welfare of the Institution. In 1868 the Board experienced some difficulty in procuring the services of a competent superintendent, and insisted that Dr. McDill, who had always manifested great interest in the treatment of this most unfortunate class, should take charge of the Institution. With many misgivings, he consented to do so for a short time. At the end of three months, so satisfactory had been his administration that the Board of Trustees insisted upon his taking permanent charge of the Institution. With great doubts as to his ability to properly conduct the affairs of the Hospital, he finally accepted the responsible position, and from first to last his administration was regarded as a success.

In 1872, Dr. McDill was elected to represent his district in Congress, which he did with the same honesty of purpose, the same undivided attention to the business before him, that characterized him in all the walks of life. After retiring from Congressional labors he was again called to take charge of the Institution he had left for two years, and in April, 1875, he once more assumed control of the State Hospital at Madison, promising himself to devote the remainder of his life to the specialty he liked so well. This he did, but alas, how short the time ! On the 13th day of November, 1875, he ceased from his labors.

In estimating the character of our departed brother, we feel that we can do no better than to reiterate the opinion of one who had known him long and intimately. "As a hospital superintendent, Dr. McDill was remarkably successful. He was a clear-headed man in all things, cool and deliberate in his actions, an excellent judge of human nature, an industrious man, popular and pleasant in his manner, in fine he possessed executive ability of the highest order. In all the relations of life Dr. McDill was an exceptionally good man, as a legislator he was able, industrious and efficient; as a physician he was skillful and successful; as a hospital superintendent he was accomplished and popular; as a citizen he was liberal and ever ready to act well his part; as a friend he was true and reliable; and as a husband and father he was affectionate, kind and indulgent."

Although cut down in the prime of life, he had not lived in vain, and the good influences emanating from him, who can estimate, who can measure their extent? The Committee would respectfully suggest that, as a tribute of respect to our departed associate, the foregoing memorial be placed upon the records of this body.

On motion it was resolved that the memoir be printed in the proceedings of the Association.

On motion of Dr. Carriel it was resolved that Dr. C. T. Wilbur, Superintendent of the School for Feeble Minded Children of Illinois, be invited to take a seat with the Association.

Dr. Grissom then read a paper on "Mechanical Protection for the Violent Insane,"* the discussion of which was postponed for the present.

The President then announced the following standing committees:

On Resolutions, &c: Drs. Walker, Reed and Grissom. On time and place of next meeting: Drs. Gray, Everts and Compton. To audit the Treasurer's accounts: Drs. Rodman, Carriel and Sawyer.

* Printed in the July Number of this JOURNAL.

The President then read a paper prepared by Dr. Isaac Ray, on "The Cost of Construction of Hospitals for the Insane."

On motion of Dr. Grissom it was resolved that the paper of Dr. Ray be published by the Association, so that each member may have several copies. On motion the Association adjourned to 3 P. M.

The Association was called to order at 3:30 P. M., by the President, at St. Vincent's Asylum for the Insane.

Dr. Bauduy read a paper on "Unconscious Cerebration and Cerebral Localization,"* the discussion of which was postponed for the present.

The Committee to audit the accounts of the Treasurer made the following report :

The Committee to audit the accounts of the Treasurer respectfully report that they have performed that duty—have compared the vouchers with the expenditures, and found the accounts correct : and that there are bills due for printing to the amount of \$413.93, and they recommend an assessment of ten dollars on each member to defray the expenses of the Association.

JAMES RODMAN,

H. F. CARRIEL,

JOHN W. SAWYER,

Committee.

The report was, on motion, accepted, and the recommendation adopted.

On motion the Association adjourned to 8 P. M.

The members were then conducted through the wards of the Asylum, and afterwards partook of a bountiful collation.

The Association was called to order at 8 P. M., by the President.

The ceremony of marriage between Dr. Andrew McFarland and Miss Abbie King was performed by Rev. Mr. Campbell, in the presence of the Association.

* Printed in the July number of this JOURNAL.

On motion the Association adjourned to 10 A. M., Thursday.

MAY 31, 1877.

The Association was called to order at 10 A. M., by the President.

The President laid before the Association invitations to visit the Mercantile Library Rooms, to attend the closing meeting of Prof. Ives' class of Washington University, and to visit the Women's Christian Home.

The minutes of the proceedings of yesterday were read and approved.

Dr. Gray then read a paper on "Suicide," the discussion of which was postponed for the present.

Dr. Hughes read a paper on "Unilateral Abscess of the Cerebellum," the discussion of which was postponed for the present.

Dr. John B. Chapin read a paper on "A Consideration of Some of the Obstacles to the Advance of Mental Medicine," the discussion of which was postponed for the present.

Dr. Gray, from the committee on the time and place of the next meeting, reported in favor of Washington as the place, and the second Tuesday of May, 1878, as the time.

On motion the report was accepted and adopted.

On motion of Dr. Walker it was resolved that the paper read by Dr. McFarland be printed in pamphlet form, so as to furnish each member with three copies.

On motion of Dr. Kempster it was resolved that the papers which have been read be discussed in the order in which they were read.

The PRESIDENT. Dr. Walker, I call upon you to submit such remarks as you desire upon Dr. Grissom's paper.

Dr. WALKER. In regard to the paper of Dr. Grissom I am free to say that I approve of it. It was distinctly moderate and written

in the most conclusive form. In relation to the distinction of Dr. Bucknill, I have nothing to say, but to express my entire concurrence. As a personal matter, perhaps I should prefer, if the Doctor could do so, to leave out all reference to me by name in that paper. All I have to say is, that my opinions in regard to the use of mechanical restraint have undergone no change during the discussion, or since the visit of our distinguished brother from across the water, but, on the contrary, having made more faithful and continued efforts during the past year than ever before, to diminish the amount of mechanical restraint, and do without it altogether, I am forced to say that I stand here to-day with my opinions entirely unchanged. I believe it is not only a humane thing, but absolutely essential for the best good and comfort of our patients. I believe this, that the practice of the best American institutions on that point to-day will, hereafter, be the practice of Christendom. I have no doubt of it at all. I do not wish to say a word to call out unkind criticisms or incite any feeling whatever, and I content myself with saying that my opinions are not only unchanged, but that they have been more and more confirmed in my practice of the past year.

Dr. GRAY. In any remarks I may make, I shall not attempt to follow the long and elaborate paper of Dr. Grissom, neither shall I feel it necessary to enter into the discussion of the merits of the various modes of restraint resorted to in the treatment of certain cases of insanity. That some kind of restraint, in certain cases, is necessary, seems to be universally conceded in practice, despite the theories. Dr. Grissom happily strikes the key-note when he uses the word "protection." The term *non-restraint*, which our British brethren are so fond of using, is as inapplicable there as it is here and I do not see that they are in a position to lecture us on non-restraint, until they have adopted such a system themselves. We confess to the use of mechanical restraint, in a small proportion of cases, and they confess to the use of manual restraint and forcible seclusion in padded rooms. We put ourselves in a false position when we allow them to arraign us from a standpoint of no restraint. The real question at issue is not restraint or non-restraint, but whether mechanical or manual restraint is the most judicious and humane, when such means of treatment are demanded for the best welfare of the patient. I think Dr. Grissom has put the question clearly, and it is a fair matter for discussion, in the light of experience, to determine the relative value of the two modes. The discussion of the subject, on its merits, by experienced men on

both sides of the water can certainly do no hurt and may do good. The whole question of restraint is practical and not speculative. Nobody advocates restraint, in any form, as a *system of treatment*, but merely as a method of protection against the violence occasionally manifested in the disease. It is unnecessary to talk about non-restraint or restraint as "corner-stones," or of restraint as anything beyond incidental protective measures. It probably would not be disputed that all modes might be dispensed with, and all patients left to themselves and to the impulses arising out of their disordered states, but would this be judicious or humane? In Britain men of equal experience differ on the problem of restraint, as their journals clearly show, and as the paper of Dr. Grissom has demonstrated. In the great reaction from the excess and abuse of restraint, some are going to the other extreme, but this will in the end right itself. What we now seek to demonstrate is the minimum of restraint needed and to use as little as possible is the aim of practice, and no one advocates anything else. The *mode* of restraint will resolve itself under clinical observation, and as the whole matter is a question of medical practice, we are not to be arraigned as ignorant and barbarous, as the *Lancet* would make us.

It has been objected to mechanical means that they humiliate, as well as deprive the person of his freedom. They do interfere with personal liberty, but only in the way of protecting against violent, injurious and too often degrading conduct, arising out of delusions, or symptoms of disease. To be forcibly held by attendants is quite as humiliating (if either humiliates when persons are in such a state) and quite as great interference with personal freedom, and in my opinion and in my experience far more irritating. Indeed I have often had patients beg to have restraint put on in the anticipation or dread of a paroxysm of maniacal violence, or melancholic frenzy, and many persons, after recovery, have thanked me for thus protecting them from self-injury and personal exposure. I said in the beginning I should not here discuss the merits of modes of restraint, but I will say that I should prefer a camisole, in a paroxysm of violence, which would confine the hands, without compressing or bruising a single muscle or nerve, to the strong arms of one or more attendants. The chances of injury would certainly be greater under the latter, and the interference with personal liberty quite as decided.

I do not see that we can take exception to what Dr. Bucknill has said of us on the use of restraint, for this is universal practice and

the members of the Association are on record. His statements of facts are not contradicted, but his inferences and arguments are proper topics of criticism and discussion. I have seen nothing in the British journals which would indicate that he had given any false impressions of our practice on this point. We ought not to confound what he has said, through the columns of the *Lancet*, with what that journal has said editorially and through its self-constituted commission. Indeed Dr. Bucknill defended us from the false statements of the *Lancet*, and the sensational and offensive attack of the *Lancet's* Commissioner, J. Mortimer Granville, M. D. He belongs to a class of writers and self-constituted alienists, real mischief makers, the men who have zeal without knowledge, and whose lack of experience leads them to exaggerate, misinterpret, misapply and mix up the ideas of others; mere *doctrinaires* who are incompetent to weigh either facts or theories, which must be judged of under the illumination of clinical observation.

The *Lancet* believing itself a sort of umpire, assailed Dr. Bucknill for not obtaining an accident list of American institutions. Dr. Bucknill might have asked any superintendent on this point, and he would have received full information, but he did not happen to do so. The fact is he was not a "*Lancet* Commissioner" to "report," but only a visitor. We keep an account of all accidents, and record them in the history of the cases in which they occur, as I suppose all Institutions do. We are not to hold the profession of Great Britain, much less those of the specialty, responsible for such utterances as were contained in the *Lancet*, any more than we are to hold ourselves responsible to the public, for the misrepresentations and platitudes of a similar class of would-be-alienists in our own country. These writers, as I have already intimated, and as you all know, have little or no experience on the topics which they undertake to discuss, and what they say is too often only ill-digested comprehension of the labors of others, distortions of truth, and comparisons of results, the determining data of which are quite beyond their knowledge.

Another point of difference between British and American asylums mentioned, is that we are without diet tables. This is true, and few, if any, American institutions have published diet lists, but this can not be taken as evidence of poor living. If our British brethren will look at the item of "provisions" they will be satisfied that we live well enough as a general thing. Unfortunately in some of the asylums under the care of municipal authorities, and among, these those of New York City, which Dr. Bucknill visited,

insufficiency in quantity and quality of food has, particularly in the past, been a well-grounded complaint, but even there it will compare favorably with some of the meager and coarse dietaries I have noticed in the printed foreign reports. An English gentleman passing through the wards at Utica at the dinner hour, noticing butter seemed surprised and said, "Do you give butter to your patients in this way?" I replied, "Yes, but you see we do not give beer as you do. Our people prefer butter, your people prefer beer." Now all this is custom, and disparaging comparisons are unnecessary. Gentlemen, we shall work out the problems before us if we fail not to rest on experience.

Dr. CURWEN. I do not know that I have anything special to say. I said all I desired to say in my last annual report, and I do not know that I can add to that or express it better than I did then. There seems to be a misconception on one point. These cases requiring restraint are like an epidemic; they come periodically. Month after month may roll round, and very few, if any, cases will be found requiring any restraint whatever, and then there will be a period when quite a number will need to be restrained to prevent injury to themselves or others, or extreme destruction of clothing or furniture. That has been my experience, and I suppose others have had similar experience. In the discussions on this subject, this fact seems to have been entirely overlooked. It reminds me of a saying among the surgeons of the Pennsylvania Hospital, that if a man came in with a broken arm, a number more of the same kind would be sure to follow in rapid succession, and in the same way with other injuries. A gentleman may go through the wards of all the Hospitals for the Insane in this country, and scarcely find any restraint applied, often none, in any of them; but if he will repeat the visit in a few months he may see from three to six in each who seem for the time, often a very short time, absolutely to require it. If he forms his opinion from the observations of his first visit, he may be led to think that restraint can be dispensed with altogether, but in this, as in other matters, more extended observation would lead him to modify that opinion. The proportion under restraint at any one time will rarely exceed from three to six in any well regulated hospital. I use it only as a remedial means, that is what it is, and only that.

Dr. BLACK, Virginia. I heartily agree with the sentiment expressed in the paper read by Dr. Grissom, and the remarks made by Dr. Gray. I should regard the use of restraint in the same light that I would that of medicine, or anything else that would

secure control and save my patients from danger. I have adopted this plan, and expect to continue it until I find some good reason for changing it.

Dr. KENAN, Georgia. It is useless to occupy the time of this Association, but I must say in relation to mechanical restraint that we use it whenever we deem it necessary. I do not think we have enough of it in our Institution, or that it has arrived at that perfection which I hope to see. I am but a novice in the treatment of insanity, but think I can convince any gentleman here without much oratory that it would not do for us to do away with restraint. We have some powerful insane negroes, and we could not find *suitable* attendants to hold them, and if our professional brother across the water could hold, or have held, even one negro man I have in my mind's eye for one hour in a summer day I will yield the palm to him.

Dr. CHIPLEY, Ohio. I have no desire to discuss this question, or to enter into an argument either for or against it. I would much rather give my time to those gentlemen who have found it practicable to dispense with restraint for the insane. I have been exceedingly desirous to limit the application of physical restraint as much as possible. So that with me the question is not whether restraint can be avoided altogether, but to what extent it shall be practiced, and upon what principle that practice is to be based. I have found it impracticable to avoid it altogether; but I never employ restraint except in behalf of the patient, and where the interest or welfare of the patient is considered. The ease or convenience of the attendant is never consulted, and then I make the restraint as brief as possible. If I find the patient is determined to refuse food I put him under restraint, and force the food into him. If I find another patient exhausting his vitality by standing up or pacing the room, and never lying down, I apply restraint to compel a horizontal position, making him as comfortable as possible, and saving the vitality if I can. I think restraint is to be determined upon in every case, each for itself, with the patient's welfare in view, upon one general principle—to avoid mechanical restraint as far as possible, but never to neglect it if the comfort and welfare of the patient require such means. I would rather hear from other gentlemen who have found it practicable to avoid mechanical restraint altogether, and yet do full justice in all cases of insanity, because if it can be done I want to learn the way.

Dr. GUNDRY, Ohio. I confess myself to have experienced a great deal of regret at hearing that paper. I will speak frankly

what I have to say. I do not disagree with so many of the conclusions, but there are some subjects upon which I think silence is very much better than constant remonstrance. There are a few aspects, looking at the question of the paper, theoretically and practically. Theoretically, I do not suppose you will find many men disagreeing. Dr. Bucknill says in one of his letters: "I can imagine a case in which I could conceive it necessary to bind up a man in order to restrain him, but I never saw such a case." I do not quote the exact words. I think that covers the whole point—that there are cases in which he might think it necessary to use restraint—I mean mechanical restraint—restraint by which the limbs are confined by mechanical means. Practically, I think a man will be tolerably bold who will say that he can not do without it. I think if the determination is made to do without it, it can be, and the success or want of success will depend a great deal upon the idiosyncracies of the people by whom you are surrounded, and also the tact and influence which those connected with the institution will have. Now, I use very little restraint—have used only the camisole and long sleeves since I have been in the Hospital. I have used them when I thought proper. I have experimented for the last year, and for a period of about nine months before I left Athens I had not to use restraint. I do not mean to say I will not use it; but I do say that restraint is the exception in the treatment of patients. I therefore very much regret the appearance of a paper like this, which defends it on such broad grounds as would seem to place it where it may be called the corner-stone of our specialty.

I look upon restraint in the same way as the surgeon looks upon amputation—it is sometimes necessary to save life. Twenty years ago he would amputate where he now resects. So we have diminished the number of cases where we resort to restraint. We survey our mistakes year by year, and our failures. We are sure to remember our successes. We are gradually broadening in our experience and broadening in our sense of trust of our fellows. You can not say that accidents are the result of one system or the other. In England they are obliged to keep a list of accidents, to be exhibited to such visitors as desire to deduce facts from them. There is no such record here, and Dr. Bucknill declares that this is wanted here. Accidents are not prevented until we can show a properly authenticated list of accidents that do actually occur, and that is all, I suppose, he means to say. In certain situations they may be attributed to non-restraint, and in others to restraint.

As Dr. Curwen has properly said, it is like epidemics; it seems to me that at times these waves influence hospitals—the wave of homicidal propensity or of suicidal impulse. These things influence communities inside as well as outside, and then the problem is presented to the physician's mind. What are you to do to prevent it? No theory will account for his practice at that time; he has to take every person on his own individual basis. I have been just as careful as I can be so that I may not be misunderstood by any of you in my views. It is a subject I very much regret to speak upon, and a subject I dislike to refer to any more than is possible. I think we ought to avoid the use of restraint just as much as possible. I think, on the other hand, we ought to exhaust every resource when necessary, and not allow pride to stand in the way of doing anything for our patients. Then I do not think that we shall err very much in the treatment of the cases that come up. But I do object to any going away with the feeling that restraint is the corner stone of treatment, and forthwith go home, not to see how much they can lessen it, but to use it more than before. This is what I protest against.

Dr. GRAY. I wish to correct Dr. Gundry. I spoke of the criticism about accidents in the *Lancet*, not by Dr. Bucknill. Nobody considers restraint a corner-stone of treatment as far as I am aware.

Dr. GUNDRY. If I understand rightly, the letters appeared, then the *Lancet* made attacks upon us while Dr. Bucknill defended, and then the article appeared here in the JOURNAL OF INSANITY, and therefore they were referred to in this way. It is very unfortunate that Dr. Bucknill did not see more of our hospitals, for some that he did see we would ourselves unite in condemning quite as strongly as he did. He saw very few institutions; he passed by one of the largest; that ought not to have been, as he would have seen a very great contradiction to some of his remarks. This is very unfortunate, but I do think the Doctor sat down with a right-minded purpose, and I hardly think we should attribute improper motives.

Dr. CHIPLEY. Some of the remarks made would seem to be based on the idea that some American superintendents consider mechanical restraint as the corner-stone of treatment. I do not think this Dr. Bucknill's idea, or that such construction of his language would be just. From what he said, however, some might infer that certain physicians do regard it as a corner-stone. I know that American superintendents generally regard it as a necessary evil, and resort to it only when the choice lies between manual and mechanical restraint.

Dr. KENAN. Of course I met this question as a novice, but upon the broad idea that these things were resorted to after all other things had failed. In the absence of my superintendent I feel called upon to say that we apply all other means assiduously, until we come to the conclusion that these are all the means left, then we try, as Dr. Chipley remarked, the simplest form of restraint to suit the case, and that only for as limited a time as possible.

The hour of adjournment having arrived the Association adjourned to 8 P. M.

The Association spent the afternoon in an excursion down the Mississippi in a large steamboat provided by Captain I. S. Scudder.

The Association was called to order at 8 P. M. by the Vice-President, Dr. Walker. The Association resumed the discussion of Dr. Grissom's paper.

Dr. STRONG, Ohio. Mr. President, this subject of restraint has been already so thoroughly and exhaustively discussed that I can add nothing. In fact, as presented here I feel that there is but one side to the question. I must cordially and emphatically endorse the views of Dr. Grissom on this subject. I differ from my worthy friend, Dr. Gundry, in what he has said, especially on one point; it is that he regretted profoundly that the subject had come up, and that it was being agitated at this time. I rejoice that the subject is up for discussion. If we are wrong let us seek light that we may become right, if right let us vindicate ourselves, and show that the attacks made by Dr. Bucknill are unjust. He has virtually charged cruelty and incompetency against some of the most worthy men of our Association. He has arrived at very wide and sweeping conclusions, which are wholly unwarranted from his premises, and I cannot see why we should seek to keep this subject from discussion. The Association would be certainly culpable if it did not seek the present opportunity to vindicate itself from the attacks of Dr. Bucknill. What do we propose? We propose to be guided by the peculiarities of each case. We do not propose to say that a certain case must be treated because

a certain other case *was*, but because the particular case in hand requires it. While, as before stated, I can add nothing special to this discussion, I feel it is due to us that we place ourselves right before the country on this subject of restraint. There is a point connected with this matter that must not be overlooked. We never hear *total* non-restraint advocated. No one will deny but that there are cases where restraint is absolutely necessary. I have never met a man but would concede that there were cases where restraint was indispensable, and just as necessary, under some circumstances, as to bandage and splint a fractured limb. It seems to me that they concede very much when they acknowledge that in certain contingencies it is necessary and vital to employ restraint. When they reach this point they make a very grave confession, so much so that their position becomes weak and untenable. Viewed in this light I can see but one side to this question. We are to exercise due discrimination in the employment of restraint, and to use it for the protection of all concerned, when necessary. We are to use it as a means to a certain end, to use it without abusing it. By so doing we do not ignore, but rather recognize the great law of kindness which underlies the treatment of the insane. Restraint with a view to protection is justified by every principle of reason and humanity. The insane themselves may absolutely require it, and the general welfare of a hospital may demand it. In this, as in all kindred matters, the highest benevolence contemplates the greatest good to the greatest number. Judicious restraint, applied with due discrimination and wisdom, to occasional cases is a practice, in my judgment, which can never be safely abandoned by those who have charge of the insane.

It is to be regretted that the name and fame of Dr. Bucknill has become thus unfortunately associated. It is unfortunate that a blot has appeared on a single page of his history. For one I have always felt that Dr. Bucknill was to be revered and honored for his high attainments and useful labors in our specialty. I think so still. I think he has done great injustice to us, and trust that the time will come when he will realize his mistake, and perhaps acknowledge the great error he has fallen into in regard to restraint or mechanical protection, as practiced by American superintendents of hospitals for the insane.

Dr. BOUGHTON, Wisconsin. I am quite sure that there is no division of opinion among us in regard to mechanical protection. It has occurred to me that sometimes in order to form a proper estimate of any given policy, it is well to inquire what has led to

that policy, and in order to form a proper estimate of the policy now prevailing in English institutions, it may be well to inquire what has led to that policy of so-called non-restraint.

I think we are warranted in saying that the protests of the people against past abuses have driven the managers of these institutions into a field they never would otherwise have entered. We all know the early history of British hospitals, the abuses practiced, severity of treatment, discomfort of quarters, the poor and insufficient food and prison-like restraint universally practiced. The people remonstrated, sensational writers like Charles Read have added to the distrust, so that their institutions have been compelled to relinquish restraint and retreat to the opposite side of the field. The history of this subject is much like the history of homœopathy. When physicians had bled, purged and otherwise exhausted their patients beyond the hope of recovery, for a series of years to a degree, that people became afraid of the doctors, (and upon this prejudice rested the success of homœopathy) the frightened doctors said we have gone too far, forgive us and we will never give any more medicine, the dose shall be so infinitesimally small that it wont hurt anyone. So has been the history of restraint for the insane. Is not this just the position of the advocates of non-restraint? Of course this does not reflect upon the present managers of English institutions for the insane, that the crimes of the fathers are visited upon the children to the third and fourth generation. It is simply a case of excessive reaction of popular feeling. There is no such reactionary feeling in this country, and there has never been cause for it, therefore England is no example for us to follow in the matter of restraint. We are free to choose the best methods of control without being coerced by outraged public opinion. While I am ready to believe that English institutions could not now be well managed otherwise than they are in this regard, there is no reason why *we* should occupy this ground, and refrain from such restraint as we are satisfied is necessary for the best good of our patients. The insane have always been well treated in American institutions. Public sentiment has never risen against us and forced us into a line of action that we would not have freely chosen on its merits alone. It may be, however, that there is one work that we should give more attention to, and that is, to cultivate a feeling of public confidence by throwing open our wards to an intelligent public, not concealing any method of restraint and making the public feel that we have nothing to conceal.

Dr. KEMPSTER, Wisconsin. I do not know that I have anything new to offer upon this subject, and can merely express my own convictions. It seems to me that Dr. Bucknill has placed American institutions in a false light, and if it were not that it is a duty we owe to ourselves to correct the error, it seems to me that this discussion would be entirely uncalled for, because we seem to be unanimous as to the method of treatment to be used in violent cases, so far as restraint is concerned. Persons who are familiar with our views have led the public to believe that restraint is the corner-stone upon which we rest. It does not so strike me, for I believe there is not a superintendent in the United States who relies implicitly on any particular mode of treatment. If so, I have yet to meet him; neither have I met a superintendent who is in favor of universal non-restraint. On the contrary, we have repeatedly and invariably said that restraint was used only as a last resort, in order to arrive at the best good of the person concerned.

Some time ago, Mr. President, you will recollect the fact that a pamphlet was sent pretty generally through the country by a gentleman of New York State, who, by the way, is not now, and has never been connected with a hospital for insane, but who had made a brief visit to Europe, and published his views relative to restraint. In it he stated, among other things, that we were using restraint freely, and our brethren abroad not at all. In order to determine the amount of restraint used in my Hospital, I was particularly careful to go over the rolls of the institutions where every case of restraint is noted to ascertain the percentage of restraint which we had used for twelve months. I found that it was less than one per cent., and we have the average number of cases of insanity in which restraint has been found necessary, by older and better heads than mine. This includes restraint of all kinds—camisoles, muffs and covered beds, and the amount, I say, was less than one per cent. in one year. It seems to me, Mr. President, with the experience that I have had in this particular department, that restraint or mechanical protection—call it what you choose—used judiciously and prescribed, as all remedies are prescribed, by a physician, is a benefit to the persons upon whom it is applied. It seems to me to be a proper thing to say so. I should very much dislike to say publicly or privately, that there is no restraint used in the Institution with which I am connected, and then once in a while have one of those awkward things come out, which I find recorded in the English Blue-book, which we have had distributed here this evening. Indeed here we have before us in this Report

gentlemen who declare before the world, that they have no restraint at all; and yet we find when we look over their book, that they do have restraint, and, as I conceive, in one particular, an infinitely worse form than that used in American institutions. I refer to manual restraint. In order to test the relative merits of each form of restraint, manual and mechanical, I determined to put it to a practical test, and I selected a number of cases that would require the manual form of restraint if no other restraint was used. Then I placed three or four attendants with these patients in a ward and allowed them to test the efficacy of the vaunted manual system, so-called. I selected from my corps of attendants, those who had been longest in the house, those whom I could trust, those whom I knew were honest. It proved a failure. In one instance, a paroxysmal case, I took pains to stand by and watch the effect of manual restraint. I trust I may never witness such a struggle again. After more than an hour the patient was exhausted by his effort to get away from his attendants, and the instant he succeeded in getting away he would dash himself against the wall, or chair or floor. During similar paroxysms when the muff was placed on him and he was left alone he became quiet. My experiments satisfied me that manual restraint was more dangerous to the patient than mechanical. I do not wish to occupy the time of the Association by reciting other cases. I am an advocate of mechanical restraint where it becomes necessary to use it, and I use it in the same manner and for the same reason that I use remedies, that is, to relieve the patient, and in our Institution it is never applied unless directed by a physician.

Dr. BARTLETT, Minnesota. I do not know, Mr. President, as I am prepared to add very much to the arguments that have been presented in this paper by Dr. Grissom. I was educated in a hospital where mechanical restraint was used, and I still use it, always, I think, with discretion. As from time to time I have estimated the percentage, I have always found it less than two per cent. and with a number of patients exceeding five hundred.

In regard to this matter of restraint, I am glad it has been divided into two parts. Mechanical restraint itself, I consider a very small part of it when it amounts to less than two per cent. But restraint in its broadest sense, I do consider the chief cornerstone of treatment. If not, why do we seek to protect our patients by strong walls, locked doors, guarded windows, and watchful attendants, where, as I understand it, we are to assume that the English have their windows and doors wide open. During a

friend's visitation he asked some of the superintendents if they left the patients at night with the windows unguarded, and they said it was their chief anxiety; and more or less every day they expected some would land on the ground with broken limbs. He thinks in the padded rooms, and in the rooms they gave to sleeping, the destruction of property was not great, because they did not allow them anything of any value, simply straw and ticks for very excited cases. But I suppose that we may argue here the year round and not change the views of a man who has formed an opinion and expressed it. Therefore, I see little use in further consuming the time of the Association in discussing this question of restraint, which I believe to be a measure of great good, as a rule, so far as it is practiced in this country.

Dr. STEVENS, Missouri. I do not think of anything additional bearing directly upon the question, but I wish it understood that I am decidedly in favor of mechanical restraint, as the matter appears to be understood by this body.

There is, however, after all another question intimately connected with this, the kind of men at the head of the institution. Where one man will be able to quiet his patients by moral suasion, another must resort to restraint of some kind. In the qualities and qualifications of those who are entrusted with power lies the secret of success in controlling the disorderly or violent insane. I would say then, that as a general rule, when moral suasion fails, it is far better to use mechanical restraint, than what we call manual restraint. Above all things in my own case, if I were insane, I would pray to be protected from the tender mercies of half a dozen attendants manipulating my head or my limbs.

Dr. HUGHES, Missouri. I am much in accord with the tenor of Dr. Grissom's excellent paper. Its title is well chosen. In some cases the problems of determining what kind of restraint should be employed is better solved by selecting protective mechanical, in preference to irritative physical, restraint. I have had cases that I preferred to restrain by these safe, silent and passive appliances, than to confide them to the tender mercies of overtasked, irritable attendants. In some instances it is far preferable to secure excitable patients in large chairs, by passing a strap about the waist. In corridors or balconies overlooking attractive landscapes or gardens, patients can be left to gesticulate with their free arms, and even kick at imaginary foes with untrammelled feet, and expend their fury of speech upon the empty air, or commune, in their own way, with the birds and

trees and flowers. This mode is milder than to pinion each particular limb, by the hands of special attendants, and have their presence intensify and prolong the excitement. Especially is this kind of restraint preferable with patients having delusions respecting individuals, and in whose minds delusions of disagreeable and irritative personal identity are readily excited. The question of restraint is a medical one, in which sentiment should not supplant experience. The advocates of manual restraint, whilst they are mainly correct in their endeavors to largely supplement personal supervision, and manual restraint for all other forms of control, are too radical in their aims to even be entirely successful. Insane, like rational minds, differ from each other and the kind of restraint best adapted to one does not always suit the other. As well seek to employ for all cases the same narcotic, as for all the same kind of restraint. Exclusive methods of restraint for the insane are likely to share the same fate as exclusive systems of medication. Mental tranquility being one object, we should employ the minimum of that kind of restraint least annoying to the individual patient.

Where practicable, and not detrimental, let all restraint and surveillance be withdrawn, but let us not call this method, so general in this country, a *system* of restraint. The conditions demanding restraint are too diverse for the exclusive employment of manual to the exclusion of mechanical restraint, which is part of the misnamed English system of non-restraint, which is still further a misnomer so long as our English brethren retain the wet-blanket wrappings for the excitable, and their asylums are constructed as at present. We honor Connolly for *reducing*, not abolishing restraint. Narrow transoms, narrow window sash, locks and keys, padded rooms and safely constructed buildings are still in use in England—standing reminders of the impracticability of abolishing all mechanical restraint—and will doubtless remain in mockery of the effort to construct an exclusive system for the control of all classes of the insane and christen it non-restraint.

Dr. BAUDY, Missouri. Mr. President, I deem it proper to occupy the time of this Association but a few moments. So much has been said upon the subject under discussion that there remains but very little to be added. In the year 1864, after having carefully perused Connolly's work, I became fully converted to his views, and caused every means of mechanical restraint in the Asylum with which I am connected to be destroyed. A very short time elapsed when several catastrophes occurred which owed their origin to

this cause. Not many more weeks passed when I made a most narrow escape from serious injury by a blow inflicted upon me by a maniac, which served as an *argumentum ad hominem* to make me reconsider my determination. One or two cases of suicide occurred; in every case no restraint was used. Since that time I have caused mechanical restraints to be applied in every case in which previous attempts at self-destruction had been made—that is to say, I have placed them in the muff until I was satisfied that there was no farther danger. Of two evils it is better to choose the lesser; therefore I consider it as necessary to use mechanical means of restraint as to employ medicinal measures.* This applies to cases of melancholia as well as to those of masturbation, nymphomania, &c. My experience with this method of treatment has been such as to cause me to consider restraint as an indispensable means in the therapeutics of insanity, one which I should be unwilling to abandon.

I may also say, that in conversation with patients who have recovered under treatment I have never heard one complain of the use of mechanical restraint; on the other hand, they frequently complain of the attendants. None of them have ever asked that mechanical restraint should be abolished from the Asylum. On the contrary, as mentioned by Maudsley and Esquirol, there are certain patients who fear the coming on of attacks of violence, and ask to have restraint applied before the outbreak. Then again it seems to me that the use of mechanical restraint is much better than personal control exercised by the hands of attendants. In cases of acute mania it appears to me that the attempt to keep a patient quiet by the combined strength of three or four persons must be fraught with danger. Indeed, I am satisfied that one death which I witnessed was caused by the attempt of the patient to free himself from the hands of the attendants who were trying to control him. I believe now that if the camisole had been placed upon him, instead of the hands of the nurses, he would be living tonight. The only forms of mechanical restraint used in St. Vincent's Institution are the camisole, muff and anklet. One of the great advantages of the use of these appliances is that patients can safely walk about the grounds, enjoy the fresh air and sunlight, and avoid the evils of close confinement.

After long reflection on the entire subject, and having once been on the other side of the question, I must say that experience has taught me that we can not dispense with mechanical restraint, and that the real question at issue is not as to their being absolutely

essential, but that abuse of this method of treatment is to be guarded against.

Dr. HINDE, Missouri. The time of the Association has been well occupied by members from Missouri, and yet, in the absence of our Superintendent, and seeing also that Dr. Catlett is absent from the hall, it is proper for me to state that the opinion and practice of our State Asylum at Fulton are entirely in accord with the able paper read by Dr. Grissom, and the views so forcibly expressed by Dr. Gray. Dr. Smith is a man of extraordinary kindness and forbearance, and whenever he directs the restraining apparatus to be placed upon a patient, you may be sure this is the *denier ressort*. The class of cases which we occasionally find it indispensably necessary to put under restraint are those dangerous to themselves and to others—a few cases of masturbators and such as can not otherwise be kept properly clothed.

Dr. FULLER, Nebraska. Mr. President and Gentlemen, the limited experience I have had in the care and treatment of the insane prohibits my taking any active part in the discussion of the subject in question. I wish, however, to give expression to the unqualified pleasure with which I listened to Dr. Grissom's article; a pleasure due not less to its rare literary merit than to the fact that the views it expressed harmonized with my own. The discussion of this question of the use of mechanical restraint in the treatment of the insane, as it has progressed so far, reminds me very much of other discussions I have heard and participated in, in other medical assemblies: questions as to whether it is proper to administer mercurials in certain cases, or whether their administration should be inhibited in all. I feel in regard to the one as I do in regard to the other. I should not in general practice, or in a hospital for the treatment of general diseases, administer mercurials to a pulmonic, nor indiscriminately to all patients. I should administer it, however, in certain syphilitic conditions, and in any cases requiring it.

Similarly, in my present position, I should not prescribe the camisole for a patient whose insanity manifested itself in a mild and harmless delusion, nor the insane indiscriminately; but in the very rare cases in which, in my judgment, mechanical restraint was indicated, I should prescribe it regardless of the theories of others. The whole question is simply one of the propriety of a certain course of medical treatment in particular cases, and as the opinions of medical men differ, each must act upon his own judgment. Dr. Gray, in his remarks, called our attention to the fact that he had frequently seen patients, in anticipation of a coming

paroxysm of mania, beg that the camisole be applied. I have myself seen similar cases, but I have never known a patient to ask for the immediate presence of attendants to control him in his violence.

Dr. CLARK, Ontario. I do not know that I have much more to add to what has been already said. I agree, to a great extent, with other gentlemen, as to the necessity of mechanical restraint in certain conditions, such as have been mentioned. I remember reading carefully, the articles in the *Lancet*, written by Dr. Bucknill, and I was struck at the time with the vigorous *Anglo Saxon* he expressed relative to asylums on this side of the Atlantic. I felt that though he had a right to do so, he had done it in an offensive way. His visits to asylums on this side of the ocean were of a transitory nature, therefore he did not examine the internal workings as he should have done, before indulging in these criticisms. He did not visit the asylum at Toronto, but he did the Beauport Asylum at Quebec. He went into the Asylum and found nobody there to wait on him; took a cursory view of its airing-court for a few minutes and went away. He wrote an article against it based solely on his *Angelic* visit at that time. I believe he wrote on other asylums in this country from insufficient data. He was not in a position to form a just opinion of the asylums visited. His complaint about not keeping an accident record was not just, for you remember that he made no particular enquiry in regard to the accidents, that might take place in the different asylums. On the other side of the Atlantic they are tabulated. I thought it would have been his place—as an important Commissioner in Lunacy—to make more enquiry about that matter before passing judgment. I presume there is no superintendent here but keeps a journal in which accidents are recorded—the kind of accidents—how brought about—and the evidence of those who witnessed them when they happened. His conclusion, that because some of the patients appeared somewhat emaciated and pale, therefore they were not well fed, was a rapid deduction from very bad premises, because many patients are emaciated from other causes than not having enough to eat. It does not properly follow that they were not well fed, because thin and poor in flesh. These things struck me at the time I read the report; and my opinion has been strengthened since hearing the evidence here given in regard to the mode of treating patients in the United States. If I had my own choice in respect to the mode of restraint, I would prefer a camisole, a muff, or a pair of mitts, put upon me than to have a supervisor and

attendants holding me. There is a spirit of resistance among ourselves to human force, and this resistance is evident also among the insane, that will not be exercised against inanimate objects. I feel that I would prefer the latter to the former. The one has a changeable disposition, which the other has not. Between the living and the dead restraint, I prefer the latter as far as comfort is concerned.

I will give two illustrations of this in patients. In Toronto Asylum is a highly educated and intelligent woman of good antecedents, affected with religious melancholy. She went out in the lawn a few days ago, and found a piece of broken bottle. Suddenly the idea of committing suicide took possession of her and she made ugly gashes in her neck and arms with it. She told me that almost immediately afterwards, that insane tendency ceased, and she came in sorry for what she did, and said that in future she would tell me beforehand about it. In less than forty-eight hours afterwards she asked for restraint, and I asked her whether she would prefer one or two of the attendants or have the muffs put on. She chose the muff, and she was restrained in this way accordingly. Ever since she has told us of the premonitory symptoms, and we always put the muff on. Here is one example among many of a person of intelligence, and she prefers the muff to attendants. I have a negro in charge who is afflicted with attacks of mania, and at such times he asks that restraint be put on. When wristlets are on he will walk in the corridor, if not on he says he will kill somebody. He chooses these and becomes furious at attendants. I might give many instances of the same kind.

I might tell you farther, gentlemen, I have reason to believe that in many of these asylums, which show reports of non-restraint, (I have it from some of the officers of such) that restraint is winked at when indulged in by subordinates, and yet they publish reports of the success of non-restraint. Whether you put on the camisole, or put a patient under the power of drugs it does not matter; both are restraints and I prefer the mechanical restraint as more conducive to recovery. In some asylums in my own country, (Scotland) patients are said to be allowed to go out and come in as they please. I have heard though, that in such asylums drugs are largely used, so that the most maniacal can not go out, not being inclined to do so. I prefer to be free, open and candid, in these matters, rather than to desire to ride on a popular wave, and at the same time, behind the door allow restraint to be used. I have given mechanical restraint a full trial under strict surveil-

lance, and I endorse freely what has been said of its use in extreme cases, as part of treatment towards recovery.

Dr. BUCK, Ontario. I have no desire, Mr. President, to occupy the time of this meeting with any remarks of mine upon this subject, for I could add nothing to what has already been so fully and well said both by Dr. Grissom in his able paper and by those who have preceded me in the discussion of it. But I feel that it is my duty as a member of this Association to express my views upon this important point in the management of the insane which is now before us. It seems to me that we are all, at every moment of our lives, living under restraint. That with sane men who are not criminals this restraint is represented by reason and conscience. The members of the unfortunate class with whom we have to deal are deprived by their disease of these restraints, and therefore they are sent to asylums. The asylum itself with its guarded windows, locked doors and trained attendants for both day and night is, of course, a form of restraint, and in many cases this is all the restraint that is required.

The ideal mode of management of this class of persons would no doubt be to restore the perverted conscience and disturbed reason to their healthy condition; and I fancy we none of us ever forget for a moment that that is the end to be attained, or at least sought to be attained, and that all forms of restraint, and all other modes of treatment, have this for their ultimate object; but until this object can be attained some other mode of restraint over and above these mentioned must in the worst cases be employed, and the only question is what mode of restraint shall be adopted? We have only three forms at our disposal, viz: the hands of attendants, drugs and the various forms of mechanical restraint. Without denying that one of the two first may be sometimes better than the last named, I have no hesitation in stating it as my firm conviction that in the vast majority of cases the third mode is the least harassing at the time to the patient, is the most efficient and is the best mode of restraint in view of the end we must always have before our minds, the ultimate restoration of the patient to a sound mind.

Dr. GRISSOM. In concluding this debate I can add nothing to what has been so well said by others. It seems to me that the subject is quite exhausted, and so far as I have been able to apprehend it the discussion has developed no real difference of opinion. My friend, Dr. Gundry, admits all that I claim in favor of these protective measures as a principle. No one regards them other-

wise than as means of treatment. The *necessity* of *any* treatment of insanity is an evil just as insanity itself is a misfortune. No one goes beyond me in admiration for the services of the distinguished humanitarian whose views have been canvassed in the paper under discussion, but I regard his position upon this subject as exceedingly erroneous, and that it ought to be met by decided opinion.

Dr. WALKER. I wish simply to say in justice to our distinguished friend, Dr. Bucknill, what some have either forgotten or did not know, that he did us the full justice to say that he did not believe that mechanical restraint was used in any of our asylums for the purpose of lessening the labor of our attendants, nor did he believe that it was allowed, except under the directions of the attending physicians, and, further, that he thought it our belief that it was better for the patient.

Dr. CURWEN. A remark of Dr. Walker brings to my mind the fact that I received a letter from Dr. Bucknill, in which he said that upon his motion a resolution had been adopted by the British Association in relation to Dr. Nichols, and that the secretary had been directed to forward a copy to the secretary of the Association, but said resolution has never been received.

Dr. GRAY. I received a printed copy of it, and it was mentioned in the JOURNAL OF INSANITY.

Dr. CURWEN. I have never received the usual official notice.

The VICE PRESIDENT. The next paper for discussion is that of Dr. Ray, on "The Cost of the Construction of Hospitals for the Insane."

Dr. Grissom moved to reconsider the vote by which Dr. Ray's paper was ordered to be printed, which was agreed to, and the original motion was then reconsidered, and the direction to print was rescinded, and the same disposition was also made of the paper read by Dr. McFarland, and the papers were laid on the table.

Dr. GUNDRY. One of the questions submitted by Dr. Ray is the difficult one that seems to be arising in communities, in relation to building institutions properly for the insane, and in unison with the public sentiment around. The Doctor thinks that objections have arisen to building proper institutions, giving his reasons why these opinions have arisen and how they can be overcome. I sup-

pose that none of us can dispute the fact that there is a sort of public objection to building institutions for the insane, on account of their cost. I do not think it can be said there is a hostile feeling towards building institutions. I do not think that the wave of public opinion has risen so high as not to discriminate between the objection of excessive cost and the rejection of the whole matter. I can answer this, I think, for the State I represent. I have not found either of the political parties arrayed against the building of proper institutions. Of course, there are criticisms as to the manner of building, and as to how much money is to be applied. At an earlier day, when comparatively few had to be provided for, the question was easier of solution. Institutions were fewer, and materials and labor cheap, and the buildings were substantial, but most of the older buildings have regard to architectural character, but perhaps some are after the factory fashion, as Dr. Ray says. Dr. Ray gives certain reasons why a feeling has sprung up, and those he mentions I quite fully concur in, but it strikes me he omitted one very strong one, and that is the tendency of the people for fine buildings. I do not think the professional gentlemen having the directions of building themselves, have usually commenced these fine structures, but in every town in which they have been built, if any public building has been erected there before, it has been a fine, ornate public building. Those who have traveled in the West remember that the plain court-houses have given way to palatial buildings. Go further and notice the luxurious private houses, compared with what they were twenty or thirty years ago. Now the building of hospitals does not devolve upon us alone; the architects are encouraged to erect these great buildings and to put on finish of the highest style, and this in time will die out. Furthermore, there is no question that great expense has been incurred in the selection of improper sites, and the work necessary to make up the deficiency, not the work necessary to the building, but to keep the building running after it is finished, has greatly added to this expense.

Then the fashion has grown up of taking security bonds, of taking the lowest bidder, in other words, taking bonds as security, rather than the character of the man doing the work. In our State, as I suppose it is elsewhere, all contracts are given to the lowest bidder with good security. If he can get good names as his security, they are never brought to account afterwards, instead of doing what business men would do, who would take the character of the man rather than the bonds he might offer. If a

man is likely to lose he gives bonds ; and if it is impossible to make it up in extra work he will slight what he does. These are reasons why buildings cost more than they are designed to cost. Another question comes up, and that is that all classes of the insane shall be taken care of whether rich or poor, chronic or acute, and the confessed inability of the buildings already erected or building to supply that want, either in the present or in the future ; and the question arises in the public mind whether cheaper buildings can not be substituted ; and an answer can be given very easily that they can ; that the hospitals now building are necessary for the proper treatment of recent cases, and any additional structures can be made which may cheapen the whole matter. I think where we have one well-appointed building, it is better to add accessories to it which can be planned as necessary ; those who are longest insane will require less care, and they can be drafted out, and the main building relieved. The refractory patients are those that ought to be nearest the best care, they ought not to be away from the main building. These ways cheapen in any sense, because whether you add wards to the asylum or buildings outside, you dispense with much of the cost. In that way probably we may meet the demand, and at the same time not do anything which would harm the interests of the patient.

While saying this, I may here add, that is extending the number of cases over what should be the proper care of one person. I admit it, I am not talking now of a hospital in a community over which I would have the care and control. I am simply trying to reconcile what are actual necessities in the community with regard to essentials so as to do the best by all of them. If I could plan accommodations for a whole State, I would provide small districts and a suitable asylum for each ; but as affairs are running along that can not be done, and we have to give up somewhat to public sentiment and to the manner of legislation.

I do not think if we resolutely push on, do the best we can, and get the buildings in our respective States to honestly fulfill the purposes for which they are built, bringing in all the classes that ought to be brought in, making no distinction, doing our whole duty to the community, we will find serious opposition from the people when they thoroughly understand it.

On motion of Dr. Gray, it was unanimously resolved that Dr. W. A. F. Browne, of Dumfries, Scotland, late Commissioner in Lunacy, be elected an Honorary Member of this Association

The minutes of the meetings of the day were then read, and on motion, the Association adjourned to 10 A. M.

JUNE 1, 1877.

The Association was called to order at 10 A. M., by the President.

Dr. C. F. MacDonald, as one of the Committee on Chloral, made a Report* on the use of that drug.

Dr. R. M. Buck then read a paper on the "Functions of the Great Sympathetic,"† at the conclusion of which, on motion, a recess was taken for ten minutes.

On re-assembling, Dr. Catlett read a paper on "Frequent Association of Disease of the Ear with Insanity,"‡ the discussion of which was postponed for the present.

On motion, the Association adjourned to 8 P. M.

The Association spent the afternoon in visiting the City Asylum for the Insane and other charitable institutions under the care of the city.

The Association was called to order at 8:30 P. M., by the President.

Dr. NICHOLS. Having been absent from the session last evening when the discussion of Dr. Grissom's paper was closed, I desire to occupy a few moments of your time, lest I might seem to evade the responsibility of expressing my views in relation to the question, upon which we are somewhat at issue with our brethren on the other side of the water.

I wish, first, to acknowledge that a so-called investigation of the Hospital under my charge, was the indirect cause of certain unprofessional, unmanly, unfounded and unjust censures of the management of American Institutions for the Insane, that appeared in the *London Lancet* a year or so ago, and to express my regret

* Will appear in the January Number.

† Appears in this Number of this JOURNAL.

‡ Published in the July number of the AMERICAN JOURNAL OF INSANITY.

that such was the case. Then I wish to say in this public manner that I feel deeply grateful to Dr. Bucknill for his prompt and honorable defense, not only of myself, but, what is much more important, of the brethren that make up the specialty in this country. You will remember that Dr. Bucknill says, in his defense of us, that while our practice in the use of mechanical restraint differs very materially, as he believes, from theirs in Great Britain, he distinctly credits us with elevated and humane purposes in the course we pursue in this matter. Now I will say that I agree, in the main, with the views of the paper which relate to the actual use of restraint in America, in the treatment of the insane. In a conversation with Dr. Grissom after he had read his paper, I said to him, that if I had undertaken to prepare a paper upon this subject, I should have treated of the principles that underlie the use of restraint and of their application in practice, and said less of persons and their inconsistencies in this matter, than he has done. I do not wish to be understood to say, however, that a proper self-respect does not justify and even call for all the personalities of the paper; but while I might not have entered into that branch of the subject as fully as he has done, I might, to that extent at least, have done it less full justice than he has.

The substantial question at issue has presented itself to my mind in this way. In Great Britain, half a century ago and earlier, the insane were restrained by chains and irons, and treated in a very brutal manner. That manner of treating the insane has, most happily, been abandoned, and in fighting against terrible abuses, having the sanction of general custom, and vaunting the better way and the part that their leaders have taken in the great reform, the psychologists of that country have worked themselves to the opposite extreme. In doing so, as I think, they have exhibited a common human tendency. Most reformers have done the same thing. The people of Great Britain are natural leaders, and they wish to lead us in this matter, and think it a little strange that we hesitate to follow them, but not having to contend against one extreme, we see no reason why we should go to the other. We prefer to follow that golden mean in this matter, which we think is best for our patients. My last remark leads me to express my gratification that Dr. Grissom has given great prominence in his paper to the cardinal principle that requires the use of some mechanical restraint in the treatment of the insane, which is, that some use of such restraint is necessary to the protection and to the comfort and welfare of the patient. We believe that in a small

per cent. of our cases, the patient can be better protected against physical violence to himself or others, or his strength better husbanded, or his personal comfort better secured by the application of the camisole, or bed-strap or their equivalent. We think that our experience teaches us that in some cases such protection and comfort can not be as well attained by the hands of the attendants, however numerous and gentle, or in any other way, and we do not see why we should not be left to follow our own judgment in this matter, though some of our English brethren seem a little impatient with us because we persist in doing so. It is claimed by most Americans who have been abroad that our patients are more excited and destructive than English patients, and more frequently present the need of protection from exhaustion. I do not know how that is from personal observation, but if such a difference exists, it accounts in part, at least, for the difference in the views and practices of the two countries. It is a significant fact in my own experience that intelligent patients have much oftener complained to me of restraint by the hands of attendants, than of that effected by some mild mechanical means. In fact, convalescent patients have rarely condemned the mechanical restraint and coercion used in their treatment, while they have often complained that their wrists or arms were held too tightly, or that too much pressure was made upon different portions of their bodies, when it seemed to me that no more force was used than was necessary to prevent the patient from dashing about and bruising and exhausting himself; and if American patients were to decide this matter in the popular way in this country—that is, by vote—I think American practice, as compared with the English, would be approved “by a large majority.”

As Dr. Gundry has remarked, much less mechanical restraint, and much less seclusion are now used in our institutions for the insane than were formerly resorted to in them. We have all been striving to improve our methods of treatment, until more attendants are allowed, and better facilities for exercise and diversion are provided in most institutions than formerly was the case, and we have the aid of more and better therapeutic agents than we formerly had, all of which enable us to dispense with restraint, without sacrificing the welfare of the patient, more frequently than we formerly could. Our constant aim should be, and I do not doubt that it will be, in the same direction, and I trust that we shall be able to still further reduce the proportion of cases in which restraint will be deemed advisable. It wounds my sense of human

dignity to see any patient under mechanical restraint, and the members of this benevolent Association will agree with me, I am sure, that mechanical restraint should never be applied to a patient or continued, except by direction of a competent medical officer, to accomplish a definite purpose in his most humane medical treatment, that in his (the physician's) judgment can not be as well effected in any other way. It is not possible, I think, to lay down any rule respecting the number of the inmates of an institution for the insane that may be properly placed under mechanical restraint. The practice of different institutions may properly differ, according to the character of the patients, and the facilities of treatment, but, in my judgment, the use of such vital sedatives, as tartar emetic and digitalis, in energetic doses, cold douches, or even very large nervous sedatives and hypnotics, is utterly inadmissible as substitutes for mechanical restraint.

You will remember, perhaps, that for some reason Dr. Bucknill expressed the opinion that it is incumbent on me to write a defense of American practice in the use of restraint. It has not been in my power to fulfill his expectations in this particular, and I thank Dr. Grissom for having made it unnecessary.

The next paper taken up for discussion was that of Dr. Bauduy, on "Unconscious Cerebration and Cerebral Localization."

Dr. KEMPSTER. Mr. President, out of respect to the distinguished gentleman who has taken pains to prepare a paper of this character, it seems to me hardly right to pass it by without discussion. While I consider the paper of Dr. Bauduy an able one, I do not look at the subject in precisely the same light that I understand the Doctor does. The subject is in its infancy, and we know but very little about the matter; and in judging of the experimental researches made by different individuals, we have to weigh very carefully the character of the persons who make the experiment. We find, for instance, one person makes a series of experiments upon the brain of a living animal and arrives at certain conclusions after very cautious experimentation. We find another man who says he removes the brain, slice by slice, until nearly all of it has been taken out of the cavity; fills the cavity with coagulated blood and applies an electric current, and he says that he obtains the same results as though he had applied an electrode directly to the convolutions. Here is a broad divergence. After going care-

fully over the ground, however, and making some of the experiments, I favor the doctrine of localization of the cerebral functions so far as I understand it, and my views are to some extent based upon pathological observation. Nowadays when a person is brought to us with aphasia, whatever form it may assume we are very apt to arrive at the conclusion that the function of a portion of the brain situated in the left hemisphere, and supplied by one of the branches of the middle cerebral artery, has been interfered with, and in a majority of cases, which have been tabulated by writers, we find that post-mortem examination has revealed the existence of disease in this locality, in more than five hundred cases, while there are only some twenty-five or thirty in which the disease has been found located elsewhere. I say we are apt to regard aphasia as in some way connected with disturbance of function of a portion of the left anterior hemisphere. It is known that in persons who have suffered amputation of a limb, or where a limb has been paralyzed for a number of years, that the nerve cells in that part of the cord which sends nerves to the paralyzed or amputated limb, become atrophied; the inference of course being that having no work to perform, whatever that work may have been, they indulge a process of degeneracy. Now if the nerve cells of the cord are thus affected, we may infer that nerve cells situated in the brain, especially in the particular locality of the brain wherein is said to reside the center for certain movements or functions, should also show evidences of atrophy, or some degenerative process, when the movement they are supposed to preside over, has for any great length of time been impaired or paralyzed.

M. Luys has recently presented to the Society of Biology four specimens, in which this very condition has been found—that is, he found changes of tissue in those portions of the brain which are said to preside over certain functions, after those functions have been impaired for a length of time.

I am not yet prepared to go to the same length that Ferrier, Hitzig and others have, but from some experiments I have made upon the living animal, and from reading and observation, I think there is a very decided ground for a belief in localization of function. We can not impugn the testimony of such a man as Batty Tuke, a most careful observer, who in his Morrisonian lectures delivered during 1874, alluded to some experiments he saw which were conducted by Dr. Ferrier. Opportunity was given to Dr. Tuke to make the closest examination, and in my estimation Dr. Tuke is not a man likely to be deceived, and he says that although

he is not in accord with Dr. Ferrier, relative to the explanations of the phenomena he witnessed, yet he vouches for the accuracy, I think he says, absolute accuracy of Dr. Ferrier's statements as to the fact, in every particular. Dr. Ferrier performed a series of these experiments before a number of medical gentlemen. Taking an animal under his arm he said, "Now, gentlemen, I will touch a certain part of a convolution, (naming it) and the animal will make a certain movement," (naming that) and in every particular the movement responded to the incitation.

Now such evidence can not be overthrown by mere assertion that the facts can not be as stated. We can not thus easily dispose of the testimony of such earnest men as we know these gentlemen to be. It must stand until some reason can be deduced showing that the animal would have made the same movement, if the excitation had been made at some other point, or not at all, or that there were conditions present that would have affected the animal in the same way if no experiment had been made. Month after month the same results are produced following the same experiment. We can not upset an accumulation of testimony, made by some of the best men in our profession by mere assertion, and we can not impeach the testimony of such men or say it is not so. After all, the strongest evidence to my mind, is that furnished by pathological observation. While the cases are not numerous, they are sufficiently so to warrant rigid investigation in this department. I am not yet prepared to say that by applying electricity to a particular portion of a convolution of the brain we can determine precisely the action of a particular muscle. I do not think that we have arrived at any such results, nor am I aware that Dr. Ferrier says any such thing. It is a new subject, and we are on the threshold of it, and it seems to me that instead of drawing inferences, or making assertions based merely upon our belief, we should make observations of our own, and not rely wholly upon our faith. Indeed it is only in this way that we can hope to determine many points now undetermined. That a belief in the idea of localization of function is going to destroy belief in the existence of the soul, or open the way even for belief in the doctrine of Cabanis, or tends to materialism, is pure nonsense and wholly outside the question. I believe none the less in the existence of a soul and have no less faith in the existence of my Creator, in short, I am as firm a believer in what theologians call orthodoxy now, as I was before such questions were mooted. What we want is truth and truth shall not make ashamed.

Dr. CLARK, Ontario. I do not know, Mr. President, that I can say much on this paper, except, perhaps, that I have felt for some time in reading the works on our specialty, and the works of eminent physiologists, for the last few years, and also the writings of modern scientists, like those of Tyndall, Darwin, Huxley and others, that there is a tendency of late to run into materialism. We are hearing constantly of the phenomena of mind being called functions of the body. In other words, as the liver secretes bile and the kidneys urine, so the brain secretes all the manifestations of the mind. That means that when the body is destroyed, the cause is destroyed, and the effect also must come to an end. This view is the pronounced doctrine of the writings of nearly all the eminent specialists of to-day. A sentence used by Prof. Tyndall in his celebrated lecture at Dublin, is the very cream of the whole, in which he said "all matter has in it the power and potency of life."

Now, I wish to enter a dissent and protest against this standpoint, because it would end all responsibility; for as we have no power in our volition over the secretions or excretions of the different organs, in the same way neither can we have over the so called mental secretions or excretions, being the overflow of the functions of the brain. A stand should be taken by physiologists against this *unproven* doctrine. From the earliest ages of the world, Man, like the pendulum of a clock, has had a tendency to go to extremes, and those of you who have read such works as those of Descartes, Malebranche, Kant and Sir William Hamilton, know very well that the great struggle has been for ages in regard to the relationship between the mind and body. In spite of all the fine spun theories and attempts at the localization in defined sections of the phenomena of mind, locating in different parts of the body man's desires, affections, emotions, and even his moral judgments, yet such theorists do come to a point, beyond which is inference, supposition, darkness. After they have described the phenomena as far as physical appearances indicate, they come to a line of boundary at which they lay down hypotheses and draw deductions which may, or may not be correct, even from their own premises; but until we have something more than supposition, than probabilities, I, for one, am prepared to stand by the "good old way," viz, that the mind has an independent existence from the physical, and although affected by it, is not the resultant of it.

Theorists that would go in the face of what we ourselves know and feel, that would destroy all moral responsibility, that would

annihilate the great mind that controls our physical system to some extent, should produce something more tangible than the mere hypothesis that is given by them in opposition to mental experience. I am glad that such a paper has been brought up for discussion, because I think candidly that the time has come when the other side of the question should be heard, and the full truth established, when it will be seen that our minds, in our desires, affections and moral judgments are not merely functions of a physical frame, nor only manifestations of a living, objective sphinx. I do not feel like entering into this discussion now, but I think these materialists have taken a stand that they will find erroneous when a full and thorough investigation comes; beyond the spectrum, the microscope and scalpel there is an immortal essence that will not mix "with the clouds of the valley."

Dr. KEMPSTER. Perhaps I did not make myself clear; so far as intellectual processes are concerned, so far as the operations of the mind extend, or that the process of reasoning is confined to a particular locality or convolution of the brain, I do not believe, and have no faith in localization of that kind. My remarks were made with special reference to motion, the localization of function so far as motion is concerned; beyond this I am not prepared to go, and do not wish to be understood as advocating the theory of localization of the mind.

The PRESIDENT. The Chair would be glad, and other members of the Association would also be glad to have those gentlemen who give most attention to the subject, and are best able to discuss it, express the inconsistency between a doctrine of faith and belief in the cerebral localization of the intellectual function and the doctrine so well expressed by Dr. Clark, that there is a mind behind all that. It is not quite clear to my mind that there is an inconsistency in the two doctrines.

Dr. STRONG. I am not prepared to express my views fully on this subject at the present time. I will say this, however, that the remarks of Dr. Kempster reflect the tendencies of my own views and convictions. I think, too, that we are just entering upon the threshold of this great subject, and when more fully understood it will be found that there is no real conflict between physiology and psychology. Until then, I think, there should be a broad tolerance of opinion among members in relation to the matter.

Dr. WALLACE, Texas. Mr. President, I am not prepared, and have no disposition to enter upon a discussion of the paper before the body. My purpose is simply to place myself upon record

with one of the gentlemen who has preceded me. I should dislike to suspect, after having belonged to what is regarded as an orthodox church for twenty-nine years, that I am in danger of drifting into a denial of the immortality of the soul and of moral responsibility. I certainly, however, believe, if I know what I believe, in what Dr. Clark characterizes and attempts to stigmatize as materialism, if I understand him. I as certainly at the same time believe in no such materialism as saps the foundation of moral accountability, and the prospect of immortality. One additional remark—whether or not I possess a soul destined to survive the dissolution of the body, whether or not I am a moral agent, to be held accountable for the acts done in the body, I know not; but if I know what I believe I do most certainly believe both; and for the former belief, after having been at some pains in looking up arguments that bear upon the subject, I have been able to find none more satisfactory to my understanding than that deduced from the doctrine which the gentleman would have us to believe, destroys both. If there is any argument that can be brought to bear upon this subject more convincing than that to be deduced from the doctrine of correlation of forces, and what the gentleman calls materialism, I know not where to look for it. What do we know of matter, or what that bug-bear of theologians, Mr. Tyndall, calls the potency of matter? In the language of Dr. Maudsley, “I know not why the Power which created matter and its properties should be thought not to have endowed it with the functions of reason, feeling and will, seeing whether we discover it to be so endowed or not, the mystery is equally incomprehensible to us, equally simple and easy to the Power which created matter and its properties.” It is a subject upon which I have no disposition to dogmatize, but it does seem to me that such conception of the existence of the Soul is much more reasonable and quite as consonant with inspiration as taught in many places in Holy Scripture, notably in the fifteenth chapter of First Corinthians, in which, if it was not the purpose of the great Apostle to the Gentiles to so teach, it is difficult to see what he did intend. I need hardly add that if to believe in the localization of the functions of the brain be materialism, I am a materialist. That some of these functions are so localized, physiological and pathological investigations have demonstrated, and, if some, I see no reason why all should not be.

Dr. HOWARD, Missouri. As I did not enjoy the pleasure of hearing the whole of Dr. Bauduy's paper, I can not undertake to criticise it, but as the discussion appears to have taken rather a

metaphysical turn, and as some of the gentlemen present appear to regard the modern tendency to materialism as a blot upon the fair fame of Science, I will, with the permission of the Association, make one or two remarks on that subject. It seems to me that one of the chief difficulties in arriving at a definite conclusion concerning the relationship between mind and matter, arises from the too general disposition to regard matter as something coarse, as something essentially gross, like rock or clay, or the traditional "dust of the earth." That this view is very far from being the correct one, a moment's consideration will show. Take hydrogen, for instance, a gas so attenuated that we can not, except by experiments, detect its presence by the aid of any of our external senses. There can be nothing gross about such matter as this. Think how fine must be the particles of light, and how delicate the matter which composes the odor of the flower. How infinitely subtle must be the ether which floats in inter-stellar space.

Now it would appear to be a reasonable inference that, if in this universe of ours, where all is confessedly comparatively coarse, matter of such exceeding subtlety exists, in that eternal world where "this corruption must put on incorruption, and this mortal must put on immortality," there are forms of matter relatively as much more subtle than sidereal ether, as the odor of a violet is more refined than common clay. To me there is nothing debasing in the thought that my mind is composed of such matter as this. In fact I can not conceive of mind or soul existing except as matter, and to this extent I feel no hesitation in styling myself a materialist. That cell action is capable of producing or generating mind we are not in a position at present to say; but that mind is dependent for its manifestations upon material conditions, we do most positively know; and that cell action can and does materially alter and modify its character there can be no reasonable doubt.

Dr. BOUGHTON, Wisconsin. Mr. President, I can not see that our belief or disbelief in the localization of the faculties of mind in the brain, either degrades or exalts our idea of mind or soul. Suppose we illustrate it in this way. If you go into your Chamber of Commerce you will find different men dealing in different articles, associated together, but not confining themselves to any particular locality—that is to say, there is no localization of function there. Go now to your State Capitol, and here you find distinct and definite localization. The Governor does business only in the Executive office; the Secretary of State in his office; the Attorney General in his, and so on; and these men are thereby better able to ex-

ercise their different functions. There is nothing degrading in this idea of localization, nor yet anything in the fact of non-localization in the first case. Just so, it seems to me, with the mind; localization or non-localization has nothing to do with the idea of exaltation or degradation in the scale of being. What is there degrading in the idea that certain functions of the mind are exercised by definite parts of the brain, and all forming a harmonious whole.

However, I think that speculation has given us all the light on the subject that it ever will, which is simply nothing. Actual physical demonstration is the thing to look at now. There occurs to me this evening a case in point, reported in the *Journal of Nervous and Mental Diseases*, by Dr. Hoy, of Racine, President of the Academy of Science, in Wisconsin. The case is briefly this. In October, 1842, Dr. Hoy was called to see James Lawson, aged eighteen. The patient had been kicked by a horse, causing fracture and depression of the superior angle of the left parietal bone. The patient was insensible. Trephining was resorted to, leaving an opening as large as a half dollar, and the wound was closed. Subsequent hæmorrhage necessitated the reopening of the wound, and when the brain was thus exposed, the dura-mater being intact, the Doctor tried repeatedly the effect of compression at the exposed point by the thumb, with this uniform result. A question was asked the boy, and during his answer firm compression was made at the exposed point by the thumb; the uniform result of repeated experiments was to arrest the answer instantly, and until the pressure was relieved, when the answer would be finished without any knowledge, on the part of the patient, that speech had at all been interrupted. This case presented a rare opportunity for experiment, and the result seems to point conclusively to the localization of vocal language in this region of the brain.

Dr. BUCKE. I must say, Mr. President, that I am so much of a materialist, perhaps I ought to say so wicked, in the sense in which that word has been used here to-night, I have become so accustomed to that state of mind that I had forgotten that there are people who are not materialists in the same sense.

The way I look upon this subject is as follows: we have in the class of the vertebrates a nervous system built on a certain type, which type is retained throughout this class, though the nervous system itself varies greatly in bulk and complexity of structure as we ascend from the lower species of vertebrates to the higher; and corresponding to this increased size and to this more elaborate

structure, does the individual animal become more intelligent. From the lowest vertebrates to the highest apes, it is recognized by every one that, for such a nervous system you have such an amount of intelligence, that—whatever the link between them—the one tallies with and explains the other. So that when we compare two vertebrate animals, as for instance a pike and an ape, and find that one of them, the ape, has more intelligence than the other, (if you will allow me to call it intelligence, for I am on dangerous ground here) and then upon examination find that the ape has a larger and more elaborately formed brain than the pike, we say that that accounts for the ape's greater intelligence.

When we pass from the higher apes to man, we step over a vast chasm. Man surpasses the highest apes so much in his emotional nature and his intellect, that it is said that something is added to him that the apes have not got at all, something which puts him in a different category altogether from them. I do not know whether this is true or not. But how does the ape get his higher intelligence over and above the pike? How do you account for that? This is as long a step or longer than from the anthropoid apes to man, how do you explain it? Do you say that something exists outside the ape which prompts him, something which does not exist outside the pike, which at all events does not prompt it? That the pike's psychical nature is a function of its nervous system, but that the ape's psychical nature is partly a function of its nervous system and partly independent of it, partly belonging to it and partly outside of it? No, we don't say that. We examine the ape's brain and we find that it is larger than the pike's brain, we find that it contains far more nerve cells, and that its commissural fibres are more numerous, that it is in fact a larger and a better formed brain than the pike's, and we say that that explains the ape's higher psychical nature.

Now, man is more intelligent than the highest ape, incalculably more so, and his emotional nature is perhaps still more in advance of the ape's than is his intellect in advance of the ape's intellect. But man's brain is also a better organ than the ape's brain. It is larger, its cortical layer is thicker, the sulci are deeper, the commissural fibres are more numerous. Why not then say here as we said before, that the higher organ tallies with and explains the higher function? If we do not go outside the ape's organization to explain his mind, why go outside man's organization to explain his mind? At all events before doing so, let us be sure that it is necessary to do so. Before we go outside man's organization to

explain his psychology, let us be sure that the explanation does not exist in his organization. If it can be shown that the mind of man is more in advance of the ape's mind than the nervous system of man is in advance of the ape's nervous system, then I admit we shall have to look outside man's nervous system for an explanation of his mental and moral capabilities. But this has not yet been shown, and until it is shown, I for one, shall remain what some of my friends have called this evening, a materialist, a name which is scarcely terrible to me, since I am one of those, Mr. President, who do not revile their bodies for the sake of exalting their souls, but who believe that God made them both.

Dr. MACDONALD. On account of the lateness of the hour, and the very full discussion that Dr. Bauduy's able and interesting paper has already received. I will not attempt to occupy the time and attention of the Association with any extended remarks of mine. I may say, however, that while listening to the remarks of some of the gentlemen preceding me, it occurred to me that it is hardly just to raise a hue and cry of "materialism," and to stigmatize those scientists who look to physiology and pathology as the great sources of a correct knowledge of all the mental conditions. Scientific men, when searching for truths, ought not to be sensitive, but unfortunately some are, and I have no doubt that medical men not infrequently refrain from the discussion of psychological questions, from a scientific standpoint, because they are not willing to be characterized as materialists, in the improper but common acceptance of that term. I am sure that the author of the paper did not intend to instigate a theological discussion, as I observed that he was careful to confine himself strictly to the scientific, and equally careful to avoid the theological aspect of the question.

Dr. HUGHES. Mr. President, the hour is too late for one to attempt an expression of views on this subject. Whatever views may be held in the present state of our positive knowledge must be largely conjectural. As Ferrier truly says, "we are still only on the threshold of inquiry, and it may be questioned whether the time has yet arrived for an attempt to explain the mechanism and function of the brain, and though the time may seem to some as far off as ever; yet it is useful to review and systematize the knowledge we have acquired, if for no other reason than to show how much still remains to be conquered." These are modest words from a modest and moderate thinker. Let us not disparage the work of this class of men. They may be building more wisely than

we know at present, and are doing useful work, and much remains to be done. Investigators have thrown so much light upon the dark places in cerebral physiology and pathology that we may reasonably hope that some day all may be made plain. In sacred story, it was he of the patient spirit who asked the significant question, "who by searching can find out God?" and in reading the discussions and researches of the past ten years, the question has often obtruded itself upon my mind, "who by searching can find out mind?" Our search after mind may be equally fruitless, though we see manifestations of its existence, as we discern those of the Creator's presence—everywhere. True, with scalpel, electrodes, microscope and test-tube, we are daily approaching nearer the special dwelling-places of sensation, emotion and thought, and shall probably some day definitely locate them in the brain, but beyond them will still be the unknowable, unfathomable mind. I believe "there is a spirit in man," as Holy Writ attests, and that "the inspiration of the Almighty hath given him understanding." I believe also in the indestructibility of matter, and in the sense in which John Locke said, "something must have been from all eternity." I believe we shall exist as something to all eternity. It seems to me that the discussion as to whether recent investigations lead to the conclusion that what we have been accustomed to term spirit, with but a vague idea of its nature, is in reality but a subtile form of imperceptible matter, is fruitless. Let science go on with its researches, be the results what they may. If we believe in the immortality of man, what matters it if he exists forever as a subtile form of materiality; as well so as an incomprehensible, incorporeal nothing. Our immortality is not imperilled by these researches; whatever discoveries science may reveal, it can never extinguish the divine spark within, or efface from man's mentality the impress and image of his Creator. It seems to me as reasonable to concede the existence of ideational centers, as the demonstrated existence of motor centers in the brain, and that the proper place for ideational and emotional centers would be not far from the center of motion. The speech center has been pretty well established, both by physiological experiments, and localized disease, and cranial pressure.

Dr. BAUDUY. Mr. President, now that this question has been so fully and so ably discussed by the different members of this Association, I shall be very brief in my reply, so as not to impose upon the indulgence of the gentlemen present at so late an hour of the night. It is a universally admitted fact, which I suppose no phy-

sician will deny, that all exercise of functional activity is invariably accompanied with a corresponding molecular disintegration of tissue in the organ exercised—a fact in physiology which is indisputable. I wish to state it most emphatically at this juncture, that I do not impugn the motives, nor wish to accuse of materialism, the experimenters in this field of investigation. I can not understand what pertinency theology has with this discussion. It is a purely scientific question, and does not involve any association with the dogmas of theology; it is a question of *fact*, and not one of theory. The deductions which have been made by the investigators alluded to are hypotheses, and I am entirely unable to appreciate the reasons or plausibility of the arguments of those gentlemen who have attempted to drag in at a side issue the theological question in this controversy. I am simply weighing the value of certain assertions which have been made, and the statements advanced have far from proven the position of my adversaries. In reply to my friend, Dr. Kempster, I will analyze briefly, *seriatim*, a few of the objections he made, as time will not permit me to consider them *in extenso*. First, as regards his very pertinent allusion to the phenomena of aphasia; it has been claimed, he maintains, and pretty clearly proven by physiologists and pathologists, that there exists in these cases a lesion of the posterior portion of the left third frontal convolution. Yet it seems to me quite conclusively proven, from the tabulated results of Dr. E. C. Seguin's labors, that there are numerous cases of the affection dependent upon an involvement of the convolution of the *right* side. In two cases in which there were difficulties of speech, there was no hemiplegia. "The weight of evidence, therefore, is decidedly against limiting the seat of the organ to this part. Thus, of five hundred and fifty-six cases of aphasia tabulated by Seguin, the third left frontal convolution was damaged but in nineteen. While, therefore, we must admit that injury or disease of this limited region will cause aphasia, it is going too far to assert that the lesion must exist in this situation in order that aphasia may be produced."—*Hammond*.

Prof. Ferrier himself admits that, "as both sides of the brain are symmetrical, and work conjointly, the memory of words may remain in the *right* hemisphere after the occurrence of lesion in the left." Seguin gives a table of autopsies, in which thirty-four were *against* the localization of lesion in the third left frontal convolution, and eighteen in favor thereof. The immense preponderance of disease of the *left* hemisphere is however proven in a table

in which five hundred and fourteen cases were due to lesions of the left anterior lobe, and only thirty-one to that of the right side. But still it can not be disputed that lesions on the *right* side are sometimes followed by aphasia, without any accompanying involvement of the *left* side. In this connection I would quote as confirmatory of my position the celebrated case of Velpeau, as quoted by Trousseau, of the wig maker, "a man who was in full possession of his reasoning faculties, and moreover was noted for his unconquerable loquacity." When he died, "a scirrhus tumor was found to have entirely taken the place of the two anterior lobes of the brain." Then the celebrated cases of Dr. Harlow and Dr. Jackson, who had respectively a tamping iron, and an iron gas-pipe transfix their heads with subsequent recovery must not be forgotten in this connection. Dr. Kempster's allusion to the experiments of Ferrier upon a monkey, and at which Dr. Tuke was present, I do not deem of much importance. I think it is now pretty generally admitted, even by our antagonists themselves, that electricity is not a proper agent for experimentation in this research, owing to the necessary diffusibility of the currents in the surrounding tissues. The use of caustic liquids is open to the same objection. Ferrier himself, in his work, admits that for more reliable and definite results to be attained in studying cerebral localization, it is necessary to have a most precise and thorough adaptation of means to that end.

In conclusion, I insist that certain assertions of Brown-Sequard are clearly proven to my mind, and have the most important bearing upon this discussion, and to which we will again revert; and I claim that I have never as yet known his argument in this particular to have been refuted. I more especially allude to the conclusions at which he arrived, based upon certain experiments he made assisted by his son. In these instances cauterization of the cerebral substance of one hemisphere was followed by hemiplegia on the corresponding side, namely upon the same side as that of the injury. How does such a result agree with conclusions arrived at by those who support the localization of cerebral psycho-motor centers, in whose experiments the movements are always produced upon the side of the body opposite to that hemisphere which is irritated or experimented upon? Then again Prof. Rouget's experiments, as quoted by Brown-Sequard, it seems to me are quite unanswerable, namely, that, "after producing paralysis of the anterior limb by destruction of the cortical center of the opposite side of the brain, he found that when the similar center on the

other side of the brain was destroyed, there was (instead of a paralysis of the anterior limb yet free) the cessation of the paralysis produced by the first lesion." It seems to me unnecessary to develop this subject any further, and we must content ourselves with seeking to explain and reconcile this astonishing and contradictory result of experimentation just alluded to, before it will be possible to admit any of the claims of the theory of cerebral localization upon our credulity. As long then as Brown-Sequard's position is not successfully controverted by his antagonists, it seems to me that the whole side of their question is open to the very gravest objections.

The most serious arguments of the evening against my paper were made by the gentleman to my left, Dr. Boughton. I am free to confess that at first thought I deemed them unanswerable and felt inclined to "throw up the sponge." But upon more mature deliberation, and a more thorough scrutiny or analysis of their value and applicability, I have concluded that the gentleman's antagonism is not based upon valid reasons or his position impregnable. Now that I have, therefore, had a few moments for reflection which have enabled me to digest his reasoning. I would reply to him that the aphasia, resulting in the case he adduced, was occasioned in all probability by a propagation or diffusion of the pressure which was exercised. Can any gentleman undertake to fix a limitation to the effects of the aforesaid pressure? If, for the sake of argument, I would waive this explanation, I would then cite as a corroborative proof of the position I have taken, that reflex transmission of nervous action would also be more than a satisfactory solution of the phenomena observed. The irritation of a given center may result in the production of phenomena having their origin in the functions of most distant parts of the brain, in the action or working of centers most remote from the original source of irritation. Who can gainsay these facts? Brown-Sequard, in some very carefully written papers, has very thoroughly demonstrated that regional symptomatology is a myth, or at least purely hypothetical. If Brown-Sequard is correct in his deductions, all the various centers, instead of having distinct and appropriate localization, are diffused throughout the encephalic mass, and "lesions of the brain produce symptoms, not by destroying the functions of the part where they exist, but by exerting over a distant part, either an inhibitory or an exciting influence, or, in other words, either by stopping an activity or by setting it in play." He has also claimed, and I think with reason, that "if we

suppose that each of these functional centers is located, not, as these physiologists admit, in a cluster of cells all collected in a certain space, or a limited and well-defined part of the brain, but in cells very widely diffused through that organ, we can easily explain all the facts that are furnished by experimentation on animals, and by clinical observation."

"With this theory we can easily understand why considerable lesions in the two sides of the brain may not be followed by the loss of any functions, while it is impossible to reconcile such a fact with the former theories of localization."

Now I do not consider that I have placed an unfair interpretation upon the appreciation or valuation of Dr. Boughton's objections. Diffusion of the pressure, or the theory of reflex transmission will fully explain the phenomena which he quoted as antagonistic to my position; we can thus readily understand how an irritation of any part of the brain can destroy, or on the other hand, excite the functions of distant parts. We know also, as Brown-Sequard proves, that disease in the hemispheres may be followed by alterations of nutrition in distant parts, viz.: the pons, the medulla, the spinal cord, nerves, muscles, the skin, the joints, and even the lungs (œdema, emphysema, hæmorrhage or disturbances of the circulation.) It is thus proven that a lesion in one part, develops, sometimes, symptoms dependent upon changes in other parts, which may or may not come on with rapidity, and that sometimes a lesion in one part of the brain will produce symptoms, and fail to produce them in other cases. Moreover, physiology and anatomy have not proven that centripetal impressions, or physical sensations emanating from the external world, by a new physiological process or adaptation are animalized, spiritualized, or quintessenced in the lower basal ganglia; nor is it proven that they are afterwards propelled therefrom towards certain assumed, definite centers in the cortical portion of the brain, where they constitute the basis or material nidus of the purely psychological sphere, which these new theorists claim is only stimulated into action by incentives purely extraneous, or coming from without.

The thalami optici and corpora striata, according to our belief, constitute, as Jaccoud claims, a "system of conjunction," interposed between the cerebral and true spinal systems constituting a large depot of nervous force, and being the bond of union between the spinal and cerebral apparatus, which union is an immediate one through the medium of the grey substance of the aforesaid bodies, which substance is a receptacle and point of departure of the white

fibers of the two systems, which it places in communication. There are numerous anatomical and physiological facts to prove this assertion. If we were to admit the deductions of automatic cerebration, we would soon anticipate the study of treatises which would entertain us with learned disquisitions upon the feeling, smell, taste, sight and auditory properties of our ideas, possessed, as they then must needs be, with the physical qualities of all matter; and the time would not be far distant when we should learn that instead of the monkey aping man, we would ascertain that the culmination of human perfection is to be found in man's aping the monkey.

On motion the Association adjourned to 10 A. M.

JUNE 2, 1877.

The Association was called to order at 10 A. M., by the President.

The Association took up for discussion the paper read by Dr. Gray on "Suicide."

DR. CATLETT. I had not anticipated making any remarks upon the question discussed in the paper. I agree with Dr. Gray in his conclusions, that suicide is not necessarily an insane act. I have long since arrived at that conclusion. I believe that is the legitimate conclusion from the history of the subject.

DR. KEMPSTER. Mr. President, a statement of facts will add strength to any theoretical proposition relative to any subject. I can relate a case which supports the conclusions of Dr. Gray in every particular.

About four years ago in the State in which I now reside, a man shot and killed his wife. He ran into the house, (the shooting took place in the garden) caught up a large carving knife and cut his throat, as the reports have it, "from ear to ear." The hæmorrhage was profuse. There was no one in or near the house at the time, but the neighbors heard the report of the pistol and hastened over. Going into the house they found the man lying in a pool of blood, and apparently unconscious. A physician was sent for and at first it was decided to be useless to do anything for the man, as he was supposed to be dead; he gave some indications of life, however, and received the necessary attention at the hands of the physician. The man had severed the œsophagus, and had made a

clean sweep through all the anterior tissues of the neck; the man recovered, and was tried for murder, and the question of insanity was raised. I was subpœnaed by the Court, and after making a thorough examination of the man, and a very careful study of all the testimony produced, I could not make up my mind that the man was insane, and so I gave my testimony. According to the laws of the State he was sentenced to the State Prison. At the time my views were regarded as extreme—that I had wronged the man, and that I should live to change my mind, &c. However, the man by good behavior, and in accordance with the laws of the State, reduced his time, and a few months ago was released from imprisonment. During the period of confinement he was closely watched, and no evidence of insanity detected. He is now carrying on the trade of pattern-making, and laughs at the idea of insanity. I have met with several such instances where suicide was attempted, after a homicide had been committed, and when insanity had not been observed before the act or after. I am of the opinion that suicide is not always the act of an insane mind. I therefore agree with the distinguished writer of that paper.

The PRESIDENT. Has the man first mentioned ever given a rational account of the motives that induced him to commit homicide or suicide?

Dr. KEMPSTER. He did. Whilst in State Prison I was requested by the Governor to look up the subject of insane criminals, and I took occasion to have a long talk with this man, and asked him to give the motive which prompted the act. The man had married his third wife; it was one of those hasty marriages that sometimes make men repent at leisure. He found after the wedding that he had married a prostitute, and that there was no doubt of her receiving the advances of other men after marriage; and that he knew this fact, and had borne it for a long time. Two days prior to the shooting he had most indubitable proof. I think he was eye witness of the advances of some man who went into the chamber with his wife, and he was so outraged and incensed that he felt like killing his wife at that time. He restrained himself, however, and he said he would not have resorted to shooting if it had not been that she received a proposition from this man to meet him at some out of the way place; that he had found the note and read it, and she was on the way to the place when he did the shooting; that is the reason he gave for committing the crime. The reason he gave for the attempt at suicide was the disgrace and wretchedness in

which he would be involved, knowing that he would be tried for murder. I should say that at one time he had been worth some property, a man in fair circumstances, a straightforward man, industrious and temperate, but of strong passions; and he stated to me that the reason for attempting his own life was simply to rid himself of the disgrace which would follow the publication of the act he had committed.

Dr. HAZARD. I wish to place myself on the same line with Dr. Gray. I believe that his conclusions represent my own ideas on the subject. One point can not be too strongly insisted upon—the extreme danger of assuming insanity in the individual from any one act, be it suicide, homicide, or any other.

Dr. MACDONALD. Mr. President, I wish simply to speak regarding one point which has been brought out in the discussion of Dr. Gray's very able and entertaining paper. The point to which I allude is the popular idea that suicide is always the offspring of insanity. I once held the opinion that a sane person could never commit self-destruction; but after having carefully investigated several cases, and reflected a good deal upon the subject, I have gradually reached the conclusion that occasionally suicide is the cool and deliberate act of a sane mind. One fact which explains to me the reason of the popular belief that none but lunatics destroy themselves, is the disposition of society to put a charitable construction upon such acts, in order to save the family or friends of a suicide from disgrace and humiliation. To accomplish this juries are apt to seize upon any circumstance that can be twisted or colored to indicate sufficient mental aberration to justify the rendering of the usual verdict of "suicide, while laboring under temporary insanity." Of course we all know that evidence of the kind mentioned would not be regarded as sufficient to establish the existence of insanity in an individual on trial for homicide, or in one whose case is being investigated by inquisition. In such cases the most overwhelming evidence is, as a rule, required in order to prove an individual insane. The common practice of rendering a verdict of insanity in every case of suicide has originated in the public mind an inference which is contrary to scientific deduction.

As regards the existence of a motive in all cases, I am of the opinion that suicide is *always the result of an incentive of some kind*. The fact that exceptional cases occur without the discovery of a motive is no evidence to my mind that a motive does not exist.

Dr. KENAN. Mr. President, I have a case in mind that may prove of some interest, a homicide and suicide in the case of a negro man whose wife was about to desert him for another. He heard of it one afternoon, and determined to kill her upon sight, armed himself—she, it seems, had been absent during the previous night and that day—the next morning he met her in the street, while he was engaged in his daily labors, and shot her; she fell, and he, supposing her dead, shot himself and was carried to prison, and the wound was found to be dangerous. The woman's injury was not serious and she lived. He died within a few days and gave as his dying testimony, that he loved her and rather than see her leave him and the children he would kill her, and supposing he would then, be hung proposed to kill himself.

No one ever suspected the least insanity from his conversations or actions. I am not prepared to say whether he was insane or not. The manner, time and extent of any pathological changes are exceedingly nice questions. I do hold, however, that a man is not necessarily insane who commits suicide, and believe that each and every gentleman present could imagine himself under such circumstances, with no visible relief, as to make him feel that he would commit suicide. Many a man, high-strung and chivalrous, yielding to a social glass of wine, thence to the gambling table where all is lost at chance, awakes sober and penitent, and in all coolness deliberates upon taking life rather than meet a devoted wife and children in poverty. I can imagine that a high-spirited man, under certain circumstances, had rather take his own life than yield it to his antagonist. It is or has been the custom in China, in duelling, for one principal to disembowel himself, feeling assured that his antagonist will do likewise.

Dr. STEVENS. I was highly pleased with the paper read by Dr. Gray, and I can truly affirm that my sentiments are in full accord with his. I have for a long time regarded this as an important question, and have anxiously desired that in the literature of our specialty there should be found something which could be referred to authoritatively in the frequently recurring cases in which we are called to testify as experts, and especially those in which the payment of life insurance policies depends upon the question, whether the act of suicide is *prima facie* evidence of insanity. I have in mind several instances in which experts have, in the most emphatic manner, given opinions which were entirely disregarded by juries and this I think grows out of the fact that the public can not regard so horrible an act in any other light than as one of in-

sanity. I confess I can see no reason why it is not possible for an individual to commit suicide as deliberately as he eats his breakfast. A young man in this city, whom I knew from his boyhood took morphine; he addressed one letter to his parents, one to his pastor and one to the public. He says, "perhaps the public would like to know how a man feels when he is about to kill himself." He then gives his reasons in detail, why he does not wish to live; in regard to the future he says, "I shall live as a bushel of coal lives, by being resolved into original elements." He evidently did not believe in the doctrine of the immortality of the soul as commonly received. I believe he performed that act as he performed the other acts of his life, so far as the mental processes were concerned. We have practical definitions of insanity that will apply to homicide as well as suicide. According to any test or definition that I know of this young man was not at any time out of his normal mental condition. Now when a man for years entertains exaggerated views of his relations to society, the case is widely different. A gentleman living in the village where I was born, told my father that at some period he would take his own life; for more than twenty years the feeling was uppermost and the act was at last performed by the bullet. Each and every case investigated should stand on its own basis, and a verdict of sanity or insanity rendered in accordance with facts and the life history of the individual.

Dr. GUNDRY. Was it a usual thing for this young man to write letters to the public and the clergy?

Dr. STEVENS. I think not, sir.

Dr. GUNDRY. Was it an unusual act to do this?

Dr. STEVENS. I think it was, he was a steamboat pilot.

Dr. GRAY. I would like to ask on that point whether it was usual for him to hang himself?

Dr. GUNDRY. That does not follow.

Dr. WALLACE. A gentleman, a Jew, asked me my opinion some time since, as to whether the sane ever commit suicide. Telling him I thought they did quite frequently, he entirely agreed with me, and related the following case, which seems to corroborate very strongly the position assumed in Dr. Gray's paper. Two brothers, Jews, by the name of Andrews, engaged in business together—the one residing in New Orleans, the other in Mobile—had been trading largely, and, as it turned out, disastrously, in cotton, during what was known as the flush times in Mississippi and Alabama. By a sudden decline in cotton they were reduced

from affluence to the verge of bankruptcy. They met, and agreed to commit suicide at the same hour, if, as was then probable, their paper should go to protest on a certain day. An advance in cotton, however, enabled them to tide over, but as sudden a decline a few weeks afterward totally ruined them. On the morning of the day on which they knew their paper would go to protest, at the same hour, the one jumped into Mobile Bay, the other into the Mississippi River, as originally agreed upon.

I had been told the sad incident previously by a nephew of the parties, so that there is not a doubt in my mind but that it is substantially correct. In it there is a strong confirmation of the position taken by Dr. Gray, of which, however, I never had a doubt myself. If none but crazy people commit suicide my conclusion would be that none are sane as people committing it almost every day act and reason the same as anybody. I believe there are those who hold that there exists such a connection between the two—if in fact the one is not a simple functional manifestation of the other—that the existence of a sane mind presupposes a sane body, and as a condition of perfect bodily health never exists, there is no such thing as perfect mental sanity. Be this as it may, sane people, people whom to class as insane would be to confound all the facts upon which the distinction between sane and insane is based, often commit suicide; it is an every day occurrence in our world.

Dr. NICHOLS. Before calling upon Dr. Gray to respond to the observations that have been made upon his paper, I will say that, like Dr. MacDonald, in the early years of my observation and study of mental diseases, I regarded suicide as a strong *prima facie* evidence of insanity, but that I have since considerably modified my views upon this subject. I now have no more doubt that persons sometimes take their own lives in an undiseased and responsible state of mind than I have that they take the lives of others in the same mental state, but as self-destruction is more opposed to human instincts than the destruction of others, I still believe that more persons are driven to suicide than to homicide by insanity. If it be true that suicide is not infrequently the responsible act of a sane mind, it follows that in wills, life-insurance, and other like cases, the burden of proof ought to belong to the party that claims the advantages of insanity as the cause of suicide, just as it does when the plea of insanity is set up in capital criminal suits. There is much force, I think, in the statement that a person who commits suicide without exhibiting decided evidences

of insanity may be insane after all, for it is undoubtedly true that most persons take their lives after the *denouement*, so to speak, of a long period of great mental trial and perplexity, as when a man makes an utter and disastrous failure in business, after a long and perplexing struggle to go through a crisis, or finds that his crime is discovered after a long and harrowing struggle to keep it a secret. It is probable, and perhaps fortunate, that courts and juries will continue to be readily convinced that men take their lives in a "fit of temporary insanity," but that does not alter the philosophical application of the facts in these cases to the jurisprudence of insanity.

As there is no past history to throw light upon the mental condition in which suicides are committed, it will always be extremely difficult to determine, even approximately, what proportion of suicides is the result of mental disease and what is not. Though entertaining no doubt that persons of sound mind sometimes commit suicide, I am still under the impression that the majority of persons who commit that most unnatural act, would have refrained from it had not the normal instinct of self-preservation been more or less weakened or partly or wholly overcome by insanity.

The paper read by Dr. Hughes on "Unilateral Abscess of the Cerebellum," was next taken up for discussion.

Dr. BAUDUY. I was an attentive listener to the learned paper of Dr. Hughes, which afforded me both pleasure and instruction. I must take exception, however, to some of the deductions which were drawn therefrom. I contend that we know no more of the physiology of the cerebellum than we did a century ago. In cerebellar symptomatology we have accomplished much, and made positive advance. Affections of the posterior cranial fossa can be diagnosticated with facility, and I agree with Niemeyer, that the evidences of disease in this locality are constant and characteristic, which fact is chiefly due to the great resistance offered by the tentorium cerebelli. The author just alluded to states, "we may readily err in diagnosis of diseases of the brain, but I do not remember to have made a mistake when I have given a diagnosis of diseases contracting the space in the posterior cranial fossa." He then alludes to the uniform success of his pupils, "who have repeatedly diagnosed them according to his instructions, and have verified the diagnosis by autopsy." These pathognomonic symp-

toms are occipital pain, vomiting, vertigo, impairment of sensibility and mobility without complete paralysis, general anæsthesia, and difficulties of deglutition and articulation. The dizziness is not an hallucination, but results from certain bodily movements. It is universally conceded that the cerebellum exercises no effect upon consciousness and has nought to do with intellection. In point of fact it is well ascertained that an ablation of both the cerebrum and cerebellum does not abolish sensation as long as the ganglion of the tuber annulare is not invaded. "Mere sensation and volition may exist independently of any intellectual action, as they may exist after the cerebrum has been destroyed."—*Dalton*. Paralytic manifestations do not result from disease of the cerebellum, therefore it has little or no influence over motility. Numerous instances prove that the entire half of the cerebellum may be diseased or destroyed, without inducing hemiplegia. In other cases of the same origin, hemiplegia will be present; but such instances are the result of an extension of collateral œdema, along the crura cerebelli to the hemispheres, and therefore the paralysis will not, under such circumstances, be induced by an interference with the cerebellar functions proper.

I am, moreover, convinced, after giving this subject special attention, that the cerebellum does not preside over the co-ordination of muscular movements. The deductions from pathology confirm this opinion, as they do not point to the presence of muscular inco-ordination in the diseases of the cerebellum. Andral's ninety-three cases only furnish one instance which militates against this doctrine. Brown-Sequard says that the disorders of movement consequent on mechanical lesions of the organ are caused by irritation of neighboring structures.

Duchenne and Flourens' observations, which originally made them locate locomotor ataxy in the cerebellum, have been entirely disproved and were finally abandoned by themselves. The experiments of Dr. Hammond, of New York, are conclusive, to my mind, in this respect. He says that "the entire removal of the cerebellum from some animals does not apparently interfere in the slightest degree, even for a moment, with the regularity and order of their movements.

The cases of Guérin and Alexandrine Labrosse, in whom there was a complete absence of the cerebellum, and who nevertheless walked, and other special instances on record confirm the views advocated by Hammond and other distinguished physiologists and neurologists. Time and rest are all that are necessary for the ani-

mals whose cerebellum has been removed to recover from the vertigo, shock and slight disturbance of co-ordination which temporarily and fleetingly result. Thanks to the researches of Lockhart Clarke it is conclusively proven that the power of muscular co-ordination resides in the spinal marrow. Very recent investigations, within comparatively a few months, have been made by Charcot and his pupils, which demonstrate that the pathological processes which eventuate in sclerosis are located "in the subdivisions of the posterior columns, lying between the columns of Gall and the posterior horns of grey matter, and called the posterior root-zones." This fact, as Hammond observes, explains something heretofore inexplicable; namely, why the phenomena of Pott's disease, in which there is oftentimes posterior spinal sclerosis, is yet unaccompanied by the symptoms of locomotor ataxy. I am, therefore, fully justified in concluding that, notwithstanding the close association of the posterior columns with the cerebellum, and the divergence of the former in this latter organ after they have passed through its inferior peduncle, and have there ultimately been distributed, still cerebellar influence has nought to do with muscular co-ordination, and it is clearly proven by all the facts of experimentation and modern physiology. It is now very generally conceded that the erotic faculty has not its seat in this organ. The experiments of Flint very conclusively prove this assumption. Ferrier's cogent argument against erotic localizations in the cerebellum is furnished by an experiment of Flourens on a cock, whose cerebellum had been destroyed. This animal, when placed among hens, always endeavored to tread them. Whilst desirous of sexual relations he was unable to accomplish them because, in consequence of the presence of the disturbances of equilibrium, he could not jump on their back and remain there. Although this cock had lost half of his cerebellum, his "testicles were enormous." Ferrier regards it as "a sufficiently well-established fact that lesions of the cerebellum, as such, are capable of inducing disorders of equilibrium apart from indirect injury to neighboring structures." In conclusion I still maintain that we know as yet, absolutely nothing *definite* of the cerebellar functions. I am at a loss, therefore, to understand what Dr. Hughes considers the vicarious functions of an organ whose physiology is yet *sub judice*, furnishing, as it does, no light or information as to the role it primarily plays in the human organism.

Dr. HAZARD. The functions of the cerebellum have been pretty fully discussed, yet we are still nearly completely in the dark in

regard to what they really are. From what I have been able to gather from publications and from observation, it seems to me that it is to be regarded as a re-enforcing organ or ganglion, generating an extra quantity of nervous energy, which is liberated or utilized by the higher nervous centers. But in the present confusion of ideas relating to the true functions of the cerebellum, it seems to me rather premature to conclude or to hypothecate that one lobe can, by vicarious action, perform the functions of the entire organ, when a part of it is diseased or destroyed. This seems to be the point of Dr. Hughes' paper, and it appears to me to be one that is not sustained.

Dr. BUCKE. I have only one remark to make on this subject and that is this; I do not think enough account has been taken in this discussion of the scope of the function of co-ordination when the organism is perfect, and of the small part of that faculty with which we can get on in performing the ordinary movements of every day life. Supposing the cerebellum to be the center of co-ordination of muscular actions—as I believe it is—the whole of that large organ might well be required in having to perform such complicated motions as are involved in, for instance, playing the piano, dancing, skating, driving horses, shooting with a rifle and flying, and hundreds of others as complicated and exact motions, which can often be performed by the same man. Then compare with this immense scope of the function in question, the limited amount of the same function which would suffice for the needs of every day life, and it will be plain I think, that a large part of the organ, to which this function belongs, might be destroyed—always providing that what was left was in a condition to act—and the person still have enough co-ordinating power to perform simple acts fairly well.

Besides this consideration, there is another, which ought not to be entirely lost sight of. When a complicated act like walking has been performed some millions of times—for each time a foot is put down, the whole cycle of the act is completed—the sequence of muscular acts becomes organized in the cord, and it is doubtful if, after a time, the cerebellum has anything to do with them. This is true no doubt, to a less extent of many other acts, such as writing, speaking, sewing, &c., in persons who perform these acts very frequently. In cases of congenital absence of this organ, the fact of the faculty of co-ordination being still present, to a certain extent, would not prove that that is not the function of this organ, for there is every reason to believe that other parts of the brain might, at need, take on this function vicariously.

Dr. HUGHES. Not having heard the criticisms upon my paper, and in view of the fact that there are other papers, of more interest, to be discussed, before adjournment I forego further remark.

The paper of Dr. J. B. Chapin, on "The Consideration of some of the Obstacles to the Advance of Mental Medicine," was then taken up for discussion.

Dr. KEMPSTER. Mr. President, it occurs to me that this paper ought not to go unnoticed. It is a matter of great importance to us to know what the obstacles are that present themselves, that we must overcome, in order that we may arrive at a clear understanding of some of the causes of insanity. It is a very difficult matter to attempt to respond to a paper of this character, without preparation, but the importance of the subject demands our attention. In answer to a criticism of Dr. Chapin, I do not know any investigator who has yet attempted to penetrate to the origin of thought by means of the microscope, or that anyone has yet attempted to explain or account for the origin of delusion by means of the microscope. Neither do I apprehend that pathologists or microscopists anywhere attempt to delve into what is called by some, the "unknowable," whatever that may mean. It is doubtless known to some of you that I have been trying for some years to demonstrate some of the conditions found after death in the brains of the insane, indeed it has been my constant study when I had opportunity to devote time to it. The paper of Dr. Chapin, unless I misapprehend him, is calculated to disparage, somewhat, the value of the efforts that are being made at this time in this connection, whereas we should constantly endeavor to unveil what has so long been veiled, and should sustain every effort made to find out the underlying causes of mental derangement.

Mr. President, up to the present time I have made about two hundred and sixty microscopic examinations of the brains of the insane, and I have yet to make the examination which does not reveal positive lesions, and I regret very much indeed that I have not at hand—as I should have had, had I known that such a paper was to be presented—the proof to substantiate my assertion, and give the members of this Association an opportunity to see for themselves what I have seen, and then allow them to draw their own deductions. I find that there are lesions of the nerve cells, of the nerve fibers, and of what the Germans call the binding web

which holds the whole mass together ; that there are lesions of the circulatory apparatus of the brain, in the arterioles and larger vessels. I find that there are lesions in the meninges and new growths, all of course affecting the tissue of the brain. I find that every tissue which goes to make up the brain is subject to disease. One word in reference to delusions ; that subject has engrossed my attention for some time, and has led me to make the medulla oblongata and pons varolii and the upper part of the cord a special study, and I find in those cases in which delusions are a marked feature, or where there are hallucinations of smell or taste, I find in these cases, I say, that there are lesions affecting the rootlets of the nerves which supply the organs of special sense, changes affecting the nerve fiber itself, changes affecting the structure of the nerve cells which are adjacent to the finer ramifications of the nerve fibers, and upon which it is generally believed they are in some measure dependent for the special function they appear to possess ; I say in those cases in which there are hallucinations of taste and smell, particularly, have I found lesions affecting the nerve tissue which supplies the organs indicated. I can not believe that the nerve cells are placed in the cortical substance of the brain simply to fill it up, they are there for some definite purpose. I apprehend that, in the organization of normal living tissue, each structure has a part to play. I think that there is a use for all the tissues ; they are for some particular purpose, and whatever that purpose may be, whatever the office of the structure may be in which we find the nerve cells, that office can not be properly performed when the tissues are in a state of disease. In reference to delusions to which I alluded a moment ago, I find in those cases where we have delusions involving certain trains of thought when some particular ideas or class of ideas seem to occupy the mind of the individual, in those cases I sometimes find lesions in certain parts of the brain which seem to be especially involved in all these who exhibited during life the same form of mental disease. It has been my habit for some time to group certain forms of disease together, where there have been mental manifestations of the same kind in several cases, and then take up my laboratory note-book and compare it with the case-book in which we have a carefully recorded history of each individual, together with all the phenomena presented during life, and compare the lesions found after death ; and while I am not prepared to say that I found in all instances the same form of lesion in a certain form of mental manifestation (I do not wish to be misunderstood in this particular) I

say that I do find a very striking resemblance in many of the lesions found in different individuals who had suffered from the same form of mental alienation, the lesions being so strikingly similar, and the part of the brain affected so nearly the same that there is more than a mere coincidence to warrant me in giving expression to these views.

One of the great difficulties which meet us at the threshold of these examinations, and over which many stumble and fall, is the extreme delicacy of the manipulations necessary to arrive at the results which reward us; and unless a person is specially trained, and has applied himself with the utmost assiduity to overcome the obstacles which present themselves in making these investigations, he will be apt to give up the whole subject as a matter beyond him, and believe it to be so great a task as to be impossible to follow it out, that the results will not reward the observer for the labor expended, but I assure you, gentlemen, that that is not the fact. Having overcome the preliminary obstacles to these examinations, the results will reward you, and I sincerely trust that, notwithstanding the fact that we may be called enthusiasts, there is beyond all this a field of labor in this department, which will reward every person who will enter into it with that zeal which must be given to it in order to insure success. One other "obstacle" that I was struck with in the Doctor's paper, and I am sorry that he is not present to hear the remarks that I make, was, that in acute cases of so-called mental disease it is impossible to tell whether any lesion exists or not, that we have in insanity as in other forms of bodily disease "functional disorder" lying at the bottom, that this functional disorder may be removed and the patient recover and leave no trace of the disease. We are not prepared to say that there are no cases of "functional insanity," but in those diseases called functional, I apprehend that there is no one who will pretend that there is not some disease at the bottom, which gives rise to the peculiar symptoms which we call functional, simply because we have not arrived at the time when we can positively demonstrate lesion in the brain before death, we can not deny the existence of disease there, and for want of a better term we may call the condition functional.

In the course of the examinations made, it has been my fortune to examine microscopically the brain tissues of persons who died within six weeks of the first perceptible outbreak of insanity. Among these was a case of puerperal insanity. Immediately after delivery the woman became insane, and within two weeks from

the time of her confinement she died. This case is the nearest approach to the origin of the trouble that I have had the opportunity to examine. In this case I found the most unmistakable evidences of disease, not only in the vessels, but in the brain tissue adjacent to the vessels, which had undergone change owing to the great pressure exerted by over distention of the vessels or from some other cause. I have several of these specimens in my cabinet that will satisfy anyone that there is a very marked change, both in the cells, in the fibers and in the membranes of the brain.

Another "obstacle" to which the Doctor alludes in his paper. He said, if I recall correctly, that certain forms of insanity appear to depend upon some disease of the lung and do not depend upon disease of the brain, and here we have functional insanity. Let us assume that the lung is diseased or the kidneys or that some visceral organ is impaired by disease. We know that the brain receives the largest supply of blood of any organ in the body. We know that the cells of the brain and the delicate structures of that organ are brought intimately into contact with the blood, that the grey matter receives about five times more blood than the white matter, and it is in the grey matter that the cells are placed. Now can we imagine that the delicate tissue, being thus flooded with blood conveying impurities received from the diseased viscera, can perform its functions properly, when it is floating, so to speak, in an unhealthy fluid, when it can not absorb that nourishment which is intended as food to sustain it in its normal action? I believe that frequently we may have disease of the nerve cells and fiber from just such causes as this. It strikes me that this condition can not be called functional, especially where change of the cell structure exists by reason of lack of nourishment. I can not believe that nerve cells can properly perform their duty when they are interfered with by disease in their immediate vicinity, when they do not receive the necessary nourishment which they require for normal action, or by interference from any other cause.

The statement made that I have yet to examine that brain of an insane person, which does not present palpable lesions, is perhaps sufficient without entering into a discussion of that portion of the Doctor's paper which alludes to the physical causes of insanity. I observed this fact, however, that whenever the Doctor had occasion to speak of insanity he connected it with physical changes, and I was in hopes that he would be here that I might ask him to define clearly what he meant by these, because all that

I have been attempting to show is, that I believe in the physical origin of mental aberration, that I believe that the brain is diseased in one way or another in all cases of insanity, either by the disease originating in the brain, or that some other organs being diseased, contaminate the brain through the blood supply, and set up disease.

Mr. President, the history of the rational treatment of disease shows that in most instances it has been arrived at through a knowledge of the pathological condition of the organ. If we take the liver and kidneys and other visceral organs we shall find that rational treatment of the diseases to which these organs are liable, depends on our knowledge of the pathology of these organs, and until this was understood treatment was in great measure empirical. And so it seems to me it is with disease of the brain, it must be more or less empirical until we know all about the pathology of the organ. To be sure we are on the threshold of the observations, we know comparatively little yet. It is only within the past few years that very special attention has been given to determining the diseases to which the brain is liable, and we shall not arrive at a rational treatment of insanity until we have reached a clear knowledge of the pathology of insanity. We must labor to some extent in the dark until we know all about the causation of insanity. I have not attempted to go over the minute particulars of the pathological states found in the cases of insanity examined. I have simply stated generally what I have found, not what my theory may be, nor what my ideas are relative to them, and as long as we do this we shall keep within the confines of our legitimate purposes. It seems to me that if gentlemen will take this matter in hand and pursue it persistently the "obstacle" that the Doctor spoke of will vanish. It requires labor, long and protracted; it requires application, but no matter the results will reward us.

Dr. BAUDUY. If the Doctor will permit me I would like to ask him a question. I have greatly enjoyed his observations in which I fully concur. They are very expressive. I just simply want to ask the Doctor if he elucidated the fact that when certain hallucinations of taste and smell existed, whether in his experiments he ascertained small lesions to exist in the fibers going to make up the nerve of vision, or any of the other ordinary senses, or if it extended only to the senses of smell and taste?

Dr. KEMPSTER. I found lesions affecting the fibers of the nerves in all cases where hallucinations existed referable to either of the

special sense organs. As such hallucinations are quite common in our institutions, I was led early in my investigations to look into this subject particularly, and I found in every case examined that the nerve fibers were involved.

Dr. GRAY. Mr. President, my views on the pathology of insanity are so well known to the members of the Association, by papers which I have presented, and in various discussions, and through my reports, that I do not feel like entering into a discussion, particularly at this late hour. More especially in view of what Dr. Kempster and others have said. Then again I feel averse to discussing the paper in Dr. Chapin's absence, as I desire when I differ with a member that he should hear what I say. The title of the paper would lead one to expect an account of the real difficulties or obstacles in the path of investigation. So far as I can perceive he presents nothing new, and no real obstacles are set forth, beyond the well recognized facts that nature is full of mysteries, which she does not yield readily, that investigations require a great deal of patient labor and careful analysis. This always has been so, and always will be. These are hardly "obstacles to advance." I was rather surprised at his quoting Niemeyer as throwing cold water on investigations and pathological study as a path of medical progress. I hardly recall an author more careful to mark and appreciate the value and presence of pathological changes, and one who places less confidence in the assumption of disease in their absence. I assumed, as Dr. Kempster has remarked, that though the Doctor talked about "functional disease," and the difficulty of detecting disease, and about cases of insanity, that had disease of the lungs and other organs, without affecting the brain except "functionally," that all the way through he used such words as "hyperæmia," "inflammatory exudations," "congestions," "anæmia," molecular changes," &c. I do not know what these mean if they do not mean pathological, and real physical changes. If the Doctor calls all these "functional," then we differ as to the value of terms. If, by quoting authorities, and talking about insanity occurring without disease of the brain, and that people die insane, without disease being traced in the brain, he intends to convey the idea that insanity is not necessarily a disease of that organ, but that the changes in the way of feeling, thinking and acting, marked departures from normal mental action called insanity are independent of any change in the physical organ, then I take issue with his theory, and dispute his statements. That the mind upsets itself without any change in the physical

organism, is not a new theory, I am well aware, but I have very little faith in that kind of disease, and should be quite willing to call it "functional." In my way of thinking the very essence of insanity has reference to disease of the brain, the mental phenomena being only some of the symptoms of such disease. He speaks of changes, as hyperæmia, dilatations of the vessels, interruption of the circulation, slight exudations, &c., taking place, and afterwards relieved, denominating these functional, as far as I can see, simply because the changes have not gone on to destruction of tissues and death. This is an argument for, instead of against disease, and I do not see that he reconciles all this with the statement that changes can not always be traced after death, *ergo*, there are none. We have examined a great many cases *post mortem*, and I have never seen one in which the changes have not been plainly written in the organic structure. Why, death does not come from the will of man, or from a change that may take place in his mental operations! Death comes from disease, and is its logical result. Insanity is a disease of the brain, and it kills and leaves the trace. Insane persons die of diseases of the lungs, liver, kidneys, bowels, &c., but the brain, in these cases, discloses the secret of their insanity, whether it be in the early or late stages. This is a most important matter. Insanity can not be disease in one person, and no disease in another. Are hyperæmia, congestion, exudations, &c., normal states of the vessels and their contents? In speaking of these being present, and disappearing in the early stages, one feels like asking "have you seen them?" He surely ought to answer whether post-mortems record them, for no eye can penetrate the skull.

But this at least he ought to answer, whether they are present as mere complications or incidental conditions, or whether they are the essential basis of the mental disturbance. If insanity may exist without disease of the brain, then why not always? Why should we not meet this question squarely. If we know that there is hyperæmia, &c., then we know something, and that little, I suppose, we have learned from pathological study, and I presume we shall obtain more from the same source. Dr. Kempster has given some cases where death occurred early in the disease in which he made thorough examination. It is not too much to say that one such case is of more value in clearing away "obstacles" than all the general assumptions one can make. I have reported similar cases. I do not here refer to cases where death has taken place after the slow consecutive changes that occur in the chronic pro-

gress of the disease, but acute cases, where it has occurred in the midst of maniacal excitement or frenzy, and where the whole structure has been torn to pieces in a few days. And I have reported cases of mild type in early and late stages, and where death occurred from other causes than the presence of disease of the brain, where patients have died from acute and from chronic disease of the lungs and other organs, and I recall one case particularly where death occurred within three days of the attack of insanity, from congestion of the lungs, and in all these cases the changes in the physical structures were manifest. This latter case was certainly a fair brain to examine to determine whether changes really were present or whether there was only a "functional disturbance." But, gentlemen, we must go further than these conditions mentioned. There is something behind these changes which acts as a cause of disturbances of the circulation, &c. Some morbid condition of the intimate structure itself, changes in the nerve elements which only the microscope can read, and which only can be fully read by the most patient and painstaking investigations.

The Doctor finds another "obstacle" in that the morbid conditions in other brain diseases are so like the pathological changes claimed for insanity. This is simply begging the question. There are certain laws of disease, and modes of pathological action which obtain in all morbid processes in the brain. "Hyperæmia," "anæmia," "exudations," may be like conditions in various disordered states, but what they spring from may give them very unlike significance clinically. The clinical significance of symptoms must be determined by the underlying pathological states in insanity as in other brain diseases. The differential diagnosis of diseases of the brain is being wrought out by clinical observation and investigations. It will come, but not by guessing or dogmatizing; certainly it will not come by discouraging or by neglecting investigations. By such labors alone it must come, and it will come.

Dr. NICHOLS. Dr. Chapin, on returning home before the discussion of his paper, did not appoint me his literary executor, but I think it due to him to say that his paper appears to me to have been intended rather as a protest against abandoning or undervaluing rational observation than to disparage and discourage microscopical observations. Dr. Gray and Dr. Kempster confess that these observations are in their infancy. I suppose there is no doubt of that, and also that there is much uncertainty in respect to the real light they have already shed upon the nature and treat-

ment of mental derangement. I have not myself been able to engage in the microscopical study of the healthy or disordered brain, but I am by no means prepared to deny that other people really see what I have not had an opportunity to see. I bid the gentlemen engaged in these different studies, God speed, and hope they will, in time, give us a surer knowledge of the pathology and treatment of those disorders of the encephalon, that give rise to mental aberration, than we now possess.

I frequently use the words "organic" and "functional" in talking to the most intelligent friends of patients and to medical men, and regard the use of these terms quite proper. Indeed, I do not see how we can conveniently discuss our cases in the light of our present knowledge without using them. All I mean by their use is that in one case there is more or less conclusive evidence that such palpable lesion of the mental organ (the brain) exists as experience shows is rarely followed by recovery from insanity, and that in another case, as there is little or no evidence of such a change of structure, we regard the physical disorder that underlies the mental as one of function only, or functional, and not of such a character as almost to preclude the possibility of recovery. I shall not be surprised at all if the microscope shall in time disclose delicate molecular or cell changes in cases that we now call functional, even in cases that finally recover; but that does not affect the practical value in the present state of our knowledge upon this subject of the distinction between cases of insanity that present evidences of organic, and probably incurable brain disease, and those that do not.

Another question, and one of less practical moment, has been raised in this connection. It is whether insanity is ever consequent upon a strictly functional disorder of the brain. Until Dr. Kemper puts the truth of his present impression upon this point beyond peradventure, I shall adhere to the belief commonly entertained, and that seems to be warranted by our present knowledge, namely: that organic disease is not a necessary condition of mental derangement. In the case of a man that has been intoxicated and mentally deranged and again sober, at different times every day for forty years, it is not reasonable to suppose that his brain has undergone a change in its substance and recovered from it daily during all that long period; and comparing the living brain and nervous system with the galvanic battery engaged in effecting chemical changes outside of itself, was a motive power one can well understand that, as the working of the inorganic galvano-chemical

or galvano-motor battery is effected by conditions that the microscope does not detect, and that only a scientific expert can comprehend and perceive, so the derangements of the normal working of the more complex organic and living battery may be still more occult, less perceptible to the senses, however aided, and more difficult to understand. I did not regard Dr. Chapin's paper as intended to discourage the microscopical study of brain lesions. On the contrary he distinctly bade those engaged in them "God speed."

Dr. GRAY. I do not think Dr. Nichols has sustained the "functional" theory of insanity in his remarks, and certainly there is a wide distinction between the disease insanity and the poisoning by alcohol which we call intoxication. Drunkenness is not insanity, and being intoxicated and again sober at different times a day or drunk all the time, is not being mentally deranged in any medical sense, though such a condition may be a good enough illustration of functional insanity. I have not intended to take exception to the word functional, but to the idea of functional disease and its easy alternation with "no disease." We may have disturbed function by reason of a condition of an organ under disease or under the action of poisons, or even passions, but we can not apply the word disease to a function. In disease we have something more than action or function of an organ to deal with. We have a real change in the tissues or fluids or both, which change is the pathological process and the underlying cause of the symptoms called functional disturbance. This change is one of a physical nature, and must be sufficient to disturb the functions to induce insanity.

That kind of insanity which has no physical disease as a substratum, or which consists only in the mental confusion from alcohol or opium poisoning, or unrestrained emotions, is too vague for medical recognition. The remark of the President that this paper is only a protest against ignoring or undervaluing rational observation is quite unnecessary. It is no answer to just criticism, and it is not by any means to be assumed that men who give themselves up to the deeper and more thorough investigations of the disease, would be the ones likely to neglect the common means. Dr. Chapin said nothing in his paper which conveyed such an idea to my mind, nor do I think a paper with that purpose is needed for the members of this Association.

Dr. KEMPSTER. I do not mean to convey the impression that Dr. Chapin *intended* to throw disparagement upon microscopical investigations. On the contrary, the Doctor distinctly observed

that he bade "God speed" to those engaged in the work. In reference to our President's remarks, I do not wish to take time by individualizing or relating special cases, but there is one case that comes to mind which illustrates what I mean by the so-called functional disturbance.

Within the year I had the brain of a man brought to me, who was in the habit for a number of years, of going to the saloons with his friends and getting "full," as it is called, without making any noisy demonstrations of intoxication. On this occasion he was on his way home one night and was accosted by two or three rowdies, got into a quarrel with them and was instantly killed. Within a short time I had portions of his brain under my microscope. I found there just what I expected to find. The brain cells were normal, but the circulatory apparatus exhibited all those signs which we should expect from alcoholic poison. The brain was gorged with blood and the cerebral tissue was pressed upon by the distended vessels, even the finer capillaries were filled to distention. You will remember that in the normal brain you can scarcely put down the point of a cambric needle without wounding one of the capillaries. Now when every one of these vessels is distended by the great influx of blood, some change must take place owing to the abnormal pressure, a pressure upon the brain tissue from within, instead of a pressure from without the cranium; and in gross intoxication the symptoms are closely allied to those produced by pressure upon the brain. This is as nearly the Doctor's functional disturbance as I can describe, but it appears to me that we have a changed condition of the parts. I do not take it that the Doctor used the word functional for want of a better term.

Dr. Walker from the Committee on Resolutions made the following report which was, on motion, unanimously adopted.

The members of the Association of Medical Superintendents of American Institutions for the Insane, about to close their thirty-first annual meeting, and the first (but it is hoped by no means the last) beyond the great "Father of Waters," the majestic Mississippi, in the fair city of St. Louis, desire to put upon record their thorough appreciation of the very courteous attentions they have received from his Honor the Mayor, from the Board of Health, from our professional brethren in special and general practice,

from the Managers of Public Institutions, and from the cultivated and public-spirited citizens of this beautiful and busy city. It is therefore

Resolved, that our grateful thanks are hereby tendered to His Honor, Mayor Henry Overstoltz, and to the Board of Health for their tireless efforts to render our sojourn in this proud city of the West, both profitable and pleasant, and especially for a charming ride through the picturesque suburbs, in the beautiful parks, to Shaw's unique and magnificent garden, and for a most instructive and gratifying inspection of the St. Louis Asylum for the Insane, under the guidance of our associate, Dr. Howard, and of the Hospital for Women; both of which are destined to be among the brightest jewels in the city's crown of humanity. We also gratefully remember the timely and generous hospitality and home-like welcome at the latter place. Above all, we do heartily sympathize with his Honor, the Board and Dr. Howard, in their earnest and most laudable efforts to provide for the large number of epileptic, idiotic and demented inmates of their almshouse, in a well-organized hospital for the insane, to enlarge and extend the already crowded accommodations of the St. Louis Lunatic Asylum, and to reorganize the management of these upon the principles unanimously adopted by this Association, and formulated in the series of propositions recently re-affirmed and printed for the benefit of the public. We pledge them our undivided and constant support in any effort they may make to carry out the principles laid down in those propositions; adherence to the spirit of them has always been productive of the most satisfactory results, while departure therefrom has invariably led to disappointment and regret. We further tender our grateful thanks to our old associates and valued friends, Drs. Stevens, Hughes and Hazard for their constant attendance upon our sessions and for their unwearied efforts to make memorable our visit to their home. God bless and prosper them, each and all!

To our worthy colleague, J. K. Bauduy, M. D., the visiting physician, and to the Sisters of Charity, the kind and successful managers of the St. Vincent's Asylum for the Insane, for the opportunity of minutely examining the arrangements of that time-honored Institution for the care, cure and comfort of their afflicted inmates. The neatness and order of the rooms and wards, the quiet, cheerful and evidently comfortable and contented appearance of the patients, and the cordial relations so apparent between the cared-for and the care-takers, are as creditable to them as they are

gratifying to ourselves. We also gratefully acknowledge their elegant and abundant hospitality.

To Dr. and Mrs. Stevens and friends, for the charming attentions and hospitality extended to the ladies of the Association, rendering their visit to St. Louis a present delight and a joyous remembrance.

To Capt. William A. Scudder for a welcome trip down the river in one of the magnificent steamers of the Mississippi, and to Capt. Carter for his courteous attentions to his novel and inquisitive party.

To R. P. Tausey, Esq., for his thoughtful provision of omnibuses for the easy conveyance of the members to St. Vincent's Asylum, and back to their hotel.

To the Merchants' Exchange Association for the privilege of visiting their interesting rooms and the adjoining museum.

To the Hon. Thomas Allen for the invitation to make a trip to Pilot Knob, on the Iron Mountain Railroad; to the Librarian of the Mercantile Library; to Prof. Ives, of the Washington University, and to Mrs. John A. Allen, Secretary of the Women's Christian Association, to visit their several places of interest; and which want of time, and the furtherance of the object of our meeting here forbid our acceptance, but for which we feel, and would express the liveliest appreciation. And, finally,

To the proprietors of the Lindell House, for their attentions to our individual comfort, and for the use of a most commodious parlor for our sessions; and to the reporters of the press for their accurate and full reports of our proceedings, and deference to our wishes, as well as for an abundant supply of their papers, and to one and all who have helped to make our stay here pleasant and profitable, we hereby offer our united thanks.

CLEMENT A. WALKER,
EUGENE GRISSOM,
JOSEPH A. REED,

Committee.

Dr. Grissom offered the following resolution, which was adopted:

Resolved, That we congratulate our much esteemed colleague, Dr. Andrew McFarland, an early, useful and beloved member of this Association, upon his new social relations assumed with Miss Abbie King, in our presence. We sincerely hope his days may be

long, his life happy, and that he may walk and not faint, may run and not grow weary.

Owing to want of time several Papers, which were read, could not be discussed by the members of the Association.

On motion of Dr. Curwen, the Association then adjourned, to meet in Washington, D. C., on the second Tuesday of May, 1878, at 10 A. M.

JOHN CURWEN, *Secretary.*

RETROSPECT OF GERMAN LITERATURE.

BY THEODORE DEECKE.

PARTICIPATION OF THE SYMPATHETIC IN CEREBRAL HEMIPLEGIA.

BY PROF. NOTHNAGEL, M. D., OF JENA.

Virchow's Archiv., Vol. 68, I, 1876.

In cases of long existing hemiplegia from hæmorrhages or embolic foci, aside from the common motory affections, the author sometimes observed a drooping of the upper eyelid on the paralyzed side, while the functions of all the other branches of the oculomotorius were quite normal. The question arises: why is only this single branch of the oculomotorius, the levator palpebræ superior, affected? In other cases there was noticed, beside the drooping of the eyelid, a myosis, a contraction of the pupil, but no other anomalies of functions. If, now, the ptosis were dependent upon a paralysis of that branch of the oculomotorius, whence then the contemporary myosis? In answer to these interesting questions Nothnagel reports the following case:

C. K., laborer, aged 64, enjoyed good health in former years. In 1868 the patient had a general hydrops, which existed until 1870. In the journals of the polyclinic, where he was treated, Morbus Brightii was diagnosed. After some time he was able to work again, although the œdema recurred. In February, 1870, he had a sudden apoplectic attack. Status in May as follows: frame, normal; moderate development of muscular fat; complexion, pale, but healthy. Patient is not feverish, lies mostly on the back, with a scarcely perceptible inclination of the body towards the right side; moderate œdema in the left, considerable œdema in the right lower extremity; very considerable œdema in the right upper extremity, the left entirely normal; traces of ascites. The urine shows the changes observed in nephritis parenchymatosa chronica (Bartels); moderate hypertrophy of the left ventricle of the heart; sclerosis of the palpable arteries. The expression of the patient is cheerful; when conversing he is somewhat emotional, but he seems to understand all questions addressed to him; left

by himself he is quiet and apathetic; speech is indistinct, with the exception of a few words; the tongue deviates to the right, although it is movable in all directions, but slowly, and only to a certain degree. Swallowing is difficult; when taking liquid food the patient prefers the use of a tube; the right leg is but slightly movable, the right arm immovable; during respiration the left half of the thorax expands more than the right; the same difference holds in the muscles of the abdomen; *temperature raised on the right side*; the right corner of the mouth hangs down; the right nostril is narrower than the left one; the right cheek is frequently puffed out in expiration; in the action of the *musculus frontalis*, the *corrugator supercilii* and the *orbicularis palpebrarum* there is no difference noticeable; *the eyeball is movable in all directions*; *the distance between the upper and the lower eyelid is greater on the left than on the right side, the difference being 3 to 4 Mm.*; *the outer corner of the right eye is a little lower than the left, the voluntary raising of the upper eyelid, however, is equally effective on both sides*; *the right pupil is about half as large as the left*; it reacts, also, to atropia, but slower; *the right eyeball lies much deeper in the orbit than the left, and is somewhat retracted*; we can not decide whether the cornea is flattened; *the temperature in the right ear is about 1.1° centigr. higher than in the left*; *a thin, slimy secretion is flowing continually from the right nostril, from the outer corner of the right eye, and saliva from the right corner of the mouth.*

In this case we have apparently a hæmorrhage on the left side of the cerebrum. But in summing up the symptoms emphasized in the foregoing it will soon be observed that they closely resemble in all details the phenomena resulting from a division of the cervical portion of the sympathetic. Prof. Nothnagel thinks it, therefore, more than probable that, following a cerebral lesion from hæmorrhage or embolic softening, not only the vaso-motor nerves of the extremities may become affected, as has long been known, but also those of the sympathetic nerve tracts which, through the cervical sympathetic, pass into the head and face. Where these tracts spread out or terminate in the central organs, after their course through the *pedunculi cerebri*, has not yet been anatomically ascertained. The questions, however, suggested in the beginning of this article, may be easily answered. The ptosis is not to be considered at all as the result of an affection of the branch of the oculomotorius, and there is no contradiction in the contemporary existence of the ptosis and the myosis—they both

relate to a paralysis of the oculo-pupilar fibers of the cervical sympathetic. Similar symptoms, as above pointed out, have been observed, following compression of the cervical sympathetic by tumors, and, finally, it should be mentioned that, quite recently, Brown-Sequard (*Archiv. de Physiologie*, 1875) has experimentally produced paralysis of the cervical sympathetic by cauterization of the cortex of the brain.

INSANITY FROM BASEDOW'S DISEASE.

Allgemeine Zeitschrift, 34, 1.

Dr. Böttger, of Carlsfeld, reports a case of Basedow's disease connected with acute mania, and draws special attention to the rôle which the sympathetic plays in the pathogenesis of that disease. The affection of the sympathetic, recently confirmed by a number of autopsies, favors greatly the development of cerebral symptoms by producing severe hyperæmic conditions of the brain. Among the symptoms of the case reported, there was especially remarkable a dilatation of the pupils and a hyper-secretion of the lachrymal glands.

HYPERTROPHY OF THE BRAIN.

From Professor Meynert's clinic in Vienna, is reported the following case of hypertrophy of the brain: A young girl, aged 22, of nervous family, her father a habitual drunkard, was suddenly afflicted with epileptic convulsions; she was of feeble constitution, had frequently suffered from palpitation of the heart; menstruation irregular. After nine months she had a second attack preceded by headache, dizziness and restlessness. Status of the patient when admitted: the head showed the abnormal circumference of 560 Mm.; violent shaking of both hands and feet; exophthalmus and strabismus; slight paralysis of the muscles of the face on the left side; no disturbance of speech; heart action increased, between 100 and 136; headache, dizziness; frequent singultus and vomiting; no delirium. During the following months there was a gradual aggravation of the symptoms, especially of the paretic. She died about seven months after admission. From the symptoms, a tumor, located in the posterior half of the pons varolii,

was diagnosed. The autopsy, however, revealed the following condition of hypertrophy of the brain (Rokitansky); skull-cap thin, rough at the inner surface; meninges deprived of blood; convolutions flattened; ventricles diminished in size and dry; brain-substance pale, dry, indurated; weight of the brain 1,508 grms., about 200 to 300 grms. above the normal average.

Other cases of hypertrophy of the brain are reported by A. Brunet (Breuty Charente) in the *Annales Medico-Psychologiques*, 1876. The author distinguishes two forms, hypertrophy *with* induration and *without* induration. The latter form, according to the author has not yet been described. He reports two cases complicated with peri-encephalitis during the last month of life, in idiots, one 14 the other 18 years of age. The weight of the brain in one case, was 1,780 grms., nearly 1-20 of that of the whole body, the right hemisphere 820 grms.; the left, 790; cerebellum, 147; pons, 15; medulla oblongata, 8 grms.; the meninges were much injected; the cortex softened and infiltrated with blood; the capillary vessels enormously dilated. The autopsy in the second case revealed the same condition. A partial hypertrophy of the brain, according to the author, has been rarely observed, only following a perforation of the skull and hernia of the brain.

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REPORTS OF FOREIGN ASYLUMS.

ENGLAND. *Eleventh Annual Report of the City of London Lunatic Asylum, Stone, near Dartford: 1876.* OCTAVIUS JEPSON, M. D., Medical Superintendent.

The number of patients in the Asylum, December 31, 1876, was the highest on record to that date, viz., 378; 148 males and 230 females. Ninety-three were admitted during the year, three of whom had been in the Asylum before. Twenty-four were discharged recovered, three relieved, and one "not improved." There were twenty deaths. The whole number admitted from the opening of the Asylum to December 31, was 943, of whom 181 were discharged recovered.

During the year two fatal accidents occurred, one in an epileptic woman, who suffocated, probably in a fit, the other in the case of a man who escaped from the attendant, secreted himself on the roof and soon after fell to the ground, receiving injuries from which he died the following day. A very good showing is made in the manufacture and repair of clothing, boots, shoes, ward-linen, upholstery, &c.

ENGLAND. *Report of the West Riding Pauper Lunatic Asylum: 1876.* HERBERT C. MAJOR, M. D., (Edin.) Medical Superintendent.

In the Asylum, January 1, 1876, there were 1,406 patients. Admitted during the year, 437. Re-admitted, 74. There were discharged recovered, 279; "relieved" and "not improved," 98; not insane, 1, and 136 died; so that there remained, December 31, 1876, 1,403; 695 men and 708 women.

For the fifty-nine years preceding the date just given the whole number of admissions was 14,893; 7,378 men and 7,515 women. During that time there were discharged recovered, 6,369; 2,856 men and 3,513 women; relieved, 954; not improved, 799; and 5,368 died.

The percentage of recoveries on all the admissions was 42.76; on the admissions for 1876 it was 54.59. In the month of September, out of 699 male patients, 524 were at sometime employed. This is one less than the average for the four months given, but it is not stated that it is the daily average number of those occupied. During the same month, out of 717 women, 534 were employed, which is the largest number for either of the four months.

In January, Dr. Major who has been for five years Assistant Medical Officer in the Institution, was appointed Medical Director in place of Dr. Crichton Browne, who had been appointed one of the Visitors of Chancery Lunatics.

A feature of Dr. Major's report which we especially notice is his suggestions as to classification of causes which is "that in every case, the conditions, however numerous, which, on full inquiry, would appear to have *taken part* in its production, should be recorded, and the results finally tabulated, by adding together and classifying all the causative influences assigned in all the cases under consideration." Then follows three hypothetical cases tabulated according to the proposed plan. While these *associated* causes should form part of the history of every case, they may not be at all *related* to each other, and we should fear that such an attempt at classification would not only be confusing and cumbersome, but fail in its object to give more satisfactory and definite deductions from facts.

ENGLAND. *Annual Report of the Broadmoor Criminal Lunatic Asylum*: 1875. W. ORANGE, Medical Superintendent.

On January 1, 1875, there were in the Asylum 400 men and 106 women; 30 men and 12 women were admitted during the year. Twelve were discharged recovered, all but one being removed to prisons. Sixteen were transferred to other asylums and fourteen died; leaving in the house the same number with which it began the year, viz., 506.

The full capacity of the Asylum is 563. Of those admitted, sixteen, ten men and six women, were charged with murder, and nine men with attempt at murder. One man—the only readmission—having recovered, had been remanded to prison in 1874. He was tried and acquitted on the ground of having been insane when he committed the murder, but was “ordered detained during Her Majesty’s pleasure,” and soon after was returned the Asylum. Another man, who, in 1866, murdered his paramour, “having shown no indication of insanity for several years, was discharged conditionally, to the care of a relative.” One death was due to suicide by hanging. This occurred in the case of a man who had been acquitted on the ground of insanity, of a charge of wounding with intent to murder. Those cases “under sentence of penal servitude,” are separated as much as possible from those “who were acquitted on the ground of insanity or found to be insane before trial.” “The gain to those wards which have been freed from the convict class is very marked, whilst in the other wards, into which the convicts are now collected, a system of treatment based upon a full recognition of the fact that the inmates were criminals before they became insane, and that the occurrence of insanity by no means causes them to forget their previous habits and propensities, has resulted in rendering those wards

as tranquil and orderly as any other part of the Asylum." "No form of mechanical restraint was used in any part of the Asylum during the year; but seclusion, as it is termed, is found unavoidable, especially during those portions of the day when the attendants are occupied in cleaning the wards or serving the meals." The report also contains several interesting statistical tables.

IRELAND. *Twenty-seventh Annual Report of the Cork District Lunatic Asylum*: 1876. JAMES ALEX. EAMES, M. D., Medical Superintendent.

On the first of January, 1876, there were in the Asylum 708 patients, 373 males and 325 females and 196 were admitted during the year, of whom 93 were re-admissions. Eighty-seven were discharged, 75 recovered and 12 improved; and 75 deaths occurred, leaving in the Asylum on the last day of the year 742.

One suicide by suspension is reported, death not taking place until twelve hours after the hanging, "resulting from congestion produced by the suspension."

The Doctor repeats a former request that provision be made to relieve the overcrowded condition of the house. In the way of amusements "a most essential element in the successful treatment of the insane," they have organized a band, which gives them nightly performances both winter and summer. Indoors, also, they have periodicals and a variety of games and "the nucleus of a library is about being formed."

The net profit on the land under cultivation was £8 9s. 5d. per acre. The total expenditure for the year, per patient, was £22 4s. 6 5-11d. The daily average number of patients employed was a little more than forty-seven per cent. The dietary is very simple, consisting of but two dishes at either meal as bread and

cocoa at breakfast, potatoes and soup at dinner and bread and tea at supper. In the table of causation, out of the 742 cases, 105 are attributed to moral causes, 155 to physical, 67 to heredity and 413 are set down as "not known." Among those discharged recovered one had been in the Asylum between seven and eight years and another between five and six. Such facts show the importance of persistent treatment. The report also contains the Inspector's statements regarding the condition of the house on the occasions when he visited, and also a lithograph of the Institution and grounds.

IRELAND. *Annual Report of the District Lunatic Asylum of Clonmel, County of Tipperary*: 1876. W. H. GARNER, Medical Superintendent.

At the close of the year the total number of inmates was 367; 194 males and 171 females; 22 more than on the same day of the previous year. There were 80 admissions, against 71 for the year 1875. Sixteen were discharged recovered, 12 improved, 1 escaped, and 27 died.

The Doctor's remarks are very brief. He congratulates himself and the House upon their freedom from mishap or accident during the year, but suggests that he has had other cares and anxieties, notably, "the difficulty of managing a large staff of attendants not selected by himself, and who are responsible for their acts to him merely as the Executive Officer of the Board." The table of dietary is very similar to that of the Cork Institution. No report as to occupation is given. The approximate profit per acre under cultivation is stated to be £6 5s. 8d. The average total expenditure, per capita, was a trifle under thirty pounds.

SCOTLAND. *Thirty-seventh Annual Report of the Crichton Royal Institution and Southern Counties Asylum: 1876.* JAMES GILCHRIST, M. D., Medical Superintendent.

The number of patients admitted during the year to both Institutions was 152, four being re-admissions. Eighty-eight were discharged and 33 died, leaving in the House at the close of the year, 526; 292 men and 234 women. Of those discharged 57 were recovered, 29 relieved and 2 "not improved." The percentage of recoveries on admissions was 37.5. The percentage of mortality on the number under treatment was, in the Crichton Institution, 4,237 and in the Southern Counties Asylum, 5.58.

In the Crichton part of the report is an "In Memoriam," to an old physician, who had long been a patient in the Asylum. It is reprinted from *The New Moon*, a monthly serial published in the Asylum.

Under limited and ordinary parole, 18 women and 22 men, during the year, enjoyed more than usual freedom, and 4 women and 18 men were given "unlimited parole," which allows them to walk in the country or town, sometimes attending lectures, concerts, &c.

"Experience teaches that if a judicious selection of the patients be made, the liberty given will very rarely be abused, as regards ordinary patients. To this general statement we make only one exception, in the case of the class, yecept dipsomaniacs. Rightly or wrongly we deem it our duty, from a medical point of view, in the treatment of this class, to test their recovered self-control by withdrawing the restraint of the Asylum before they are discharged. Thus, naturally enough, they form a proportion of those on parole."

One hundred and eighty-three instructive or entertaining recreations were provided for the House during the year. This does not include outdoor nor in-door games.

In the Southern Counties Asylum there are reported, under accidents, five fractures and two scalds. Three were fractures in the forearm; one, of the ribs, and one of the neck of the femur. One hundred and sixty-nine amusements, including balls, concerts, croquet parties, &c., were furnished the patients. The difficulty of securing good attendants is dwelt upon and the hope expressed that ere long "no one will be admitted to so important an office without being duly trained and certified."

SCOTLAND. *Annual Report of the Royal Edinburgh Asylum for the Insane: 1876.* T. S. CLOUSTON, M. D., F. R. C. P., Physician Superintendent.

At the beginning of the year there were 709 patients in the Asylum. During the year 360 were admitted, 180 men and 180 women; 260 were discharged, and there were 82 deaths; which left in the House at the end of the year 726; 333 men and 393 women. Of the admissions 125 were of the private class and 90 were re-admitted. Of those discharged, 160 were recovered, 75 relieved, and 25 "not improved."

Dr. Clouston discusses the question as to the *real* or *apparent* increase of insanity, and is inclined to attribute the increase of cases sent to asylums every year, to other causes than the increase of disease of the brain, and gives eight reasons for so thinking; the first of which is that, "the importance of early and suitable treatment is now more recognized, our statistics showing that many more cases are now sent in at an early stage of the disease than formerly." The second refers to the increase of cases sent "due to bouts of alcoholic excess." Third, that "cases of slighter mental disturbance, the result of old age, of paralytic attacks, &c.," are now "sent here to be nursed and cared for." The fourth and

fifth refer to economy. The sixth to the less strong prejudices against asylums. Seventh, that *custom* has made it more easy for relatives to send their insane friends to asylums and, lastly, "the present tendency of society is to be intolerant of mental peculiarities and idiosyncrasies. It will rather pay for their absence than see them in its midst."

Following this are remarks on the selection of cases whose treatment should be attempted at home and those who should go to the asylum. In speaking of causation the Doctor makes the following statement, which appears to us extraordinary: "Intemperance stands, as it always does, at the head of the list of causes, and, in nearly one-fourth of all the cases, was put down as having had more or less to do with the coming on of the mental disease." We are loth to believe that our Scotch brethren have come to such a state of inebriety as this remark implies. In his remarks on the mortality of the House, paresis receives especial attention, as there were twenty-two deaths from that cause alone. For this condition "no remedy has been devised that has ever proved successful in any one case. It is the one absolutely hopeless disease of asylums. Irish physicians tell us that in that country it is so exceedingly rare as practically to be absent. Medical statistics say that it is proved to be increasing yearly in France and there is but little doubt that it is increasing here too." A seaside house is mentioned "at which one-half of our East House ladies and gentlemen, as well as some of the inmates of the West House, spent about a month each," to the good of many and the enjoyment of all. "In the cases of some patients I think that a thorough change at a certain stage of recovery is most beneficial and completes the cure when nothing else would. I have often heard of sudden improvement in chronic,

lingering cases, through removal to another institution and have observed the same result to follow the transference here of such cases from other institutions." The Doctor refers to the disuse of high-walled airing-courts and adds, "for the treatment of certain individual patients, as individuals, an enclosed space in the open air is useful," but, as to patients in general, he reflects the well-demonstrated experience of the specialty that "they derive more benefit from walking, or working in the open grounds." After still further commending such labor he pertinently says, "unfortunately a man who is in the position of a gentleman can seldom be got to do a thing so good for him. His wits must be far gone before he will do it; and the moment they come back again, his prejudices also return."

SCOTLAND. *Fifty-Sixth Annual Report of the Dundee Royal Asylum for Lunatics*: 1876. JAMES RORIE, Resident Physician.

There were 207 patients in the Asylum June 21, 1875; 80 were admitted during the year and 19 re-admitted. Thirty-nine were discharged recovered, 30 improved or relieved and 16 died; leaving in the Institution, June 19, 1876, 221 patients, 118 men and 103 women. In the table of *causation*, out of the 99 admissions, 84 are put down as "unknown," two "not stated," one attributed to "annoyance from anonymous letters," and of the remaining twelve but nine are referred to physical causes, and of these five are credited to intemperance. Another table gives the number of patients admitted from April 1, 1820, to June 19, 1876, as 2,737, of whom 1,218 (44.5 per cent.) were cured. The average annual mortality, from 1830 to 1876, inclusive, was 6.09 per cent. The Directors report on the building of a new asylum, the site of which has been purchased. It will consist of two sep-

arate buildings, one to accommodate 80 patients of the better class, and the other for poorer patients, to the extent of at least 270.

Dr. Rorie appears to have had an enviable experience in inducing patients to take sufficient food. He reports a case admitted during the year in which "it was found advisable to use the stomach-pump to administer nourishment. This is the first time that it has been found necessary to employ this mode of compulsory alimentation in this Asylum for upwards of seventeen years."

"Arrangements have been made to test the value of the system recently recommended by Dr. Ponza. Two rooms have recently been fitted up, one for the admission of red and the other of blue light. On two occasions marked diminution of excitement was found to result from placing a patient in the blue chamber, but as yet the cases submitted to treatment have been too few to warrant a more decided opinion being given."

WALES. *Report on the Hospital for the Insane, Gladesville: 1876.*
F: MORTON MANNING, Medical Superintendent.

The year began with 642 patients; 340 were admitted, 203 men and 137 women, of whom 61 were re-admissions. The average daily number was 610. One hundred and fifty were discharged recovered, 32 relieved, 141 "not improved," and 43 died; leaving in the Asylum on the last day of the year, 616; 342 males and 268 females. The percentage of recoveries on admissions was 44.11. The Institution has been unusually overcrowded, which in "an old, badly constructed, inadequately fitted building in which there is only a proper cubic space for 450," must have caused the officers "much labor and anxiety," and "been strongly prejudicial to the best interests of the patients." After speaking of the bad arrangements of the house as to architecture, and the lack of sufficient single rooms for violent, noisy and dangerous patients, he says:

"I have been in many public Institutions, and have seen several which contained more than their proper number of inmates, but I have never seen anything like the male division of this Hospital. Some months ago the Medical Superintendent of the Asylum at Stockton, in California, took me into the wards of that Institution at night to show me what he considered to be an unparalleled overcrowding, and want of sleeping accommodation. I was obliged unwillingly to confess that the condition of my wards was far worse, and that I had not the near hope of relief which he had, in the new and magnificent Institution at Napa, capable of containing 600 patients, and all but ready for occupation."

It is the Doctor's experience that "the percentage of recoveries has been higher or lower in proportion as the Hospital has been more or less overcrowded." "Purpura has as in former years been extremely prevalent," and the cause is believed to be "the vitiated atmosphere of the overcrowded dormitories," as the dietary "though not varied is abundant, and the supply of vegetables is quite equal to that given in kindred institutions." In regard to heredity, he says:

"Every year's experience shows in a greater degree the terrible extent to which insanity, or such disease of the nervous system as conduces to it, is hereditary. It is a sad and striking fact that insanity itself, or a condition of brain strongly predisposing to it, is a legacy left to hundreds by their progenitors, and it is no small part of the benefit which Institutions for the insane confer on the community that they check, in a very large degree, the propagation of a disease so hereditary in its character."

"The number of cases (31) set down in table 10 to the credit of *intemperance* is large, and I believe the number due directly and indirectly to this cause, and to the abominable and poisonous compounds sold in a large number of the public houses in this Colony, is really larger than that stated. The habitual intemperance of language, however, in which all intemperance in drink is denounced, and the exaggeration of statement which would represent every Lunatic Asylum as a sort of cemetery for the victims of alcoholic excess, can do no good and is productive of considerable harm. It leads to a pharisaic passing by of the miseries and wants of the large and innocent majority of asylum inmates, and to an ignoring of the many other causes of cerebral disease which it is desirable to guard against."

Then speaking of idiocy resulting from intemperance of parentage, he remarks that his experience with cases of idiocy admitted to his Institution, and the Asylum for Imbeciles at Newcastle, is in accord with that of Dr. Grabham, of Earlswood Asylum, who "has stated that out of 800 idiots admitted into that Institution, he only found six instances in which intemperance in the parents was stated as a cause of the idiocy." In a large proportion of cases, idiocy appears to depend on the health of the mother during pregnancy; it is not infrequently due to shocks or fright at that period; it is often due to long-continued ill-health; and it is oftener the result of a thorough exhaustion of maternal powers. Idiots are, in one-third of the total number of cases, the youngest of the family, the last and almost abortive efforts on the part of parents worn out by ill-health and the anxieties and responsibilities of life."

SCOTLAND. *Report of the General Board of Commissioners in Lunacy for Scotland: 1876.*

This Blue-book is a large octavo of 137 pages and comprises both a general and particular view of the condition of the insane in Scotland; including their number, distribution and proportion to the population; a history of the escapes and accidents that have occurred among them; the results of treatment in and the condition of the different establishments, which embrace the Royal, District, Parochial, and Private Asylums, the lunatic wards of Poor-houses, the Training Schools for Imbecile Children and the Lunatic Department of the General Prison; the patients in private dwellings; expenditures for pauper lunatics, &c., and an appendix, with statistical tables, which is practically an epitome of reports of all the institutions in which the insane are confined or cared for in that country. Altogether the

number brought under official cognizance was 8,509 ; 3,958 males and 4,551 females. Of these 1,497 were of the private class, 6,958 were paupers and 54 were State patients in the General Prison. The number of insane to each 100,000 of the population was, in 1858, 191; in 1868, 211 and in 1876, 236. In 1861 the proportion of pauper lunatics to paupers was as 6,800 to 100,000 ; while now it is as 11,138 to the same number. But this "does not justify the conclusion that the increase is due to a more frequent occurrence of mental disease." In another part of the Report reasons are given for this apparent increase, very similar to some of the eight reasons given by Dr. Clouston and mentioned in the review of his report.

The admissions for the year numbered 2,370 ; 1,129 males and 1,241 females. Of these 535 were private, and 1,835 pauper patients. Forty-five "voluntary patients," were admitted during the year. These "are not registered as lunatics, their names and other particulars regarding them being entered in a special register. The great majority of voluntary patients are persons who place themselves under treatment in consequence of a habit of indulging to excess in the use of alcoholic stimulants, but there are not a few who do so in consequence of laboring under mental depression." If a voluntary patient is afterwards discovered to be incapable of appreciating the nature of his act in committing himself, he is then committed according to the usual prescribed form ; and some, who have been admitted in the ordinary way, remain in the asylum as voluntary patients after having been discharged improved or recovered.

During the year there were discharged recovered, 1,092 ; not recovered, 389, and 585 died. The percentage of recoveries on admissions was 46.07. One

hundred and twenty patients were discharged "on probation." Of these, 28 were finally discharged as recovered, one died, 19 remain under care of friends, 23 have been returned to asylums and 49 are still on probation. There were 272 escapes, more than half of whom were returned within twenty-four hours and all save 29 were brought back within the limit fixed by law.

Fourteen attendants were dismissed for ill-treating patients; 22 for drunkenness and 59 others for dishonesty, incompetency, insubordination, &c. The number of accidents reported to the Commissioners was 117. Thirteen ended fatally, eight being suicidal cases. There were 29 instances of fractures or dislocations, chiefly resulting from falls in epileptics or feeble persons.

There is but one establishment for the State or criminal lunatics. This forms a part of the General Prison at Perth. It has accommodations for 58 patients. Of the nine admissions for the year, three were charged with murder, one with rape and the others with serious assault or theft.

In the portion of the Report referring to the condition of the various institutions, we notice a number of instances in which overcrowding is complained of. The unusual liberty given the majority of the patients in the Banff, and Fife and Kinross Asylums is favorably commented upon. In regard to the disuse of walled airing-courts, "it is understood that, in the opinion of superintendents, no increased difficulty of management has resulted from the change; perhaps, however, the anxieties of management are somewhat increased by it." "In a large number of our asylums the doors are being furnished with locks having ordinary handles. The constant and offensive use of a key in opening the door is thus avoided, and *pro tanto* the sense of imprison-

ment is done away with." Allusion is also made to the "extended employment of the male patients in useful and profitable out-door occupations."

The number of patients in private dwellings visited by the Commissioners was 1,281. One hundred and twenty-four of these were private patients. In general the report on the utility of this system is favorable, but there seems to be a certain number of cases, as erotic young women, or some whose insanity is but slightly marked, whose care in private dwellings is attended with difficulties and risks.

The total expenditure for pauper lunatics in Scotland the past year, was £165,261, more than double the expenditure for 1858. Eight thousand pounds were contributed by friends or others. "We are of opinion that it would be a public advantage if the friends of the pauper inmates of asylums were called on and obliged to contribute more frequently to their support." The daily cost of maintaining a pauper patient in Royal, District and Parochial Asylums varies from 1s. 2 3-4d. to 1s. 8d.; in the lunatic wards of a Poor-house from 9 1-2d. to 1s. 5 3-4d., and for patients in private dwellings from 6 1-4d. to 10 1-4d. This latter class would certainly not appear to live extravagantly.

Our meager gleaning from the fields of this Blue-book merely suggests their richness and extent. The value of such a Report is positive, and we regret that we have not a similar one to lay before our friends on the other side.

Confession: the Physician and the Priest. An address delivered at the opening of the Section of Psychology at the late meeting of the British Medical Association, by Dr. JOHN CHARLES BUCKNILL. Printed in the *British Medical Journal* for August 11, 1877.

Dr. Bucknill has here chosen a subject in connection with which a very powerful excitement has pervaded

nearly all classes in England, occasioned by the exposure in Parliament, by the Archbishop of Canterbury, of a private manual of Confession, said to be in use among a portion of the Anglican clergy, and entitled the "Priest in Absolution." The book is said to enter largely into detail upon subjects connected with the Seventh Commandment, and thus to minister to prurient and uncleanly feeling or actions in those who come under its influence. The controversy is one that can not much interest or affect us here in America, where ecclesiastical matters are generally relegated to their own sphere, and seldom attract notice from the other professions. We should suppose it would be very difficult in a public address to attack the practice of confession without offense to the prejudices of Roman Catholic hearers; but Dr. Bucknill has managed this part of his task very well. His chief point is to show that the offices of priest and physician are by no means (as seems to be claimed) identical. "The physician is a naturalist, the priest a supernaturalist; no sophistry can bridge the abyss between them." The physician "pretends to no supernatural power acquired by mystic ceremonial, and he is content to do that which any other human being can do, who has taken the trouble to learn his art. That art is the correction of deviations in the organism of men's bodies, which disturb the ease with which it works in health; that is to say, the removal of bodily disease, which in itself has no necessary connection with disobedience of God's laws, and is no more sin than health is virtue." "There is absolutely nothing in medical practice corresponding to absolution, which is the very essence and acme of the priest's proceedings." The Doctor well suggests that in many cases the symptoms are quite visible or ascertainable without any history from the patient, and even in diseases of the nervous system, the

physician will often seek the history from a near relative, rather than encourage the patient to a morbid repetition of his own unwholesome thoughts and ideas.

The Doctor, however, admits that the comparison is sometimes made by good authors as a mere oratorical metaphor; as in the case of Hooker (not "Bishop") who said that "priests are spiritual and ghostly physicians in the private particular case of diseased minds." Such an illustration may be allowed, without going the length of saying that sin is disease, and the priest a physician. The Doctor's conviction and conclusion is, that caution is especially necessary to us as "mental physicians, seeing that the peculiarities of our specialty compel us to inquire into the state of men's minds, and the hidden circumstances and conditions which lead to them. The symptoms of the diseases with which we deal being far less obvious to the senses we are compelled to occupy a position which carries a greater danger that we shall be *compared with spiritual confessors*, and which needs the greater caution that we should walk with prudence and circumspection in the well-trod paths of medical reticence, forbearance and wisdom."

The opening, and major part of the address, mainly on specialism, is infused with a spirit of geniality and humor quite classic in its taste of "Attic Salt." What he says about the dangers of too narrow devotion to one idea, or one branch of work, and the importance of going occasionally out of one's special line, and mingling with minds of various characters and pursuits in the world at large, ought to furnish a valuable hint to earnest and ambitious laborers in any profession. We wish, too, that the relation of psychology to the physical improvement of the species, and the "repression of a generation of criminals," which the Doctor but glances at, could be followed up till it should promise substantial practical benefits to society. On the whole,

one can but be struck with the unusual ability of argument, combined with a style clear, keen and trenchant, that characterizes Dr. Bucknill in nearly all that he writes. He illustrates well in himself what he says to his fellow specialists, in regard to the value of general knowledge and extra professional culture. Such a paper is well worth preservation.

OBITUARY.

CARLO LIVI.

On the fourth of June, 1877, in the fifty-fourth year of his age, died one of the most illustrious Italian alienists, a man of world-wide reputation, Professor Carlo Livi, Superintendent of the Asylum in Reggio and editor of the *Revista di Freniatria e di Medicina Legale*.

A criminal process, some months previous, had called him to Livorno and there while performing duties in the interest of science and humanity, he was suddenly stricken with apoplexy on the thirty-first of March and two months later he entered into rest.

Carlo Livi was born in Prato on the eighth of September, 1823. He received his first scientific education in the Lyceum Cigonini, in that city. While in the University he was beloved and admired, both by his fellow-students and teachers, on account of his ardor, his vast knowledge in all branches of science and the simplicity and symmetry of his character. In the year 1848, when the cry of "liberty" sounded throughout his beloved country, he entered the battalion formed by the students of the University of Tuscany, which crossed the Apennines and occupied the city of Reggio. This sojourn in Reggio, Livi always regarded the happiest time of his life and he frequently referred to it.

Many of his best friendships dated from that time. Eager to take an active part in the war, the battalion crossed the river Po, passed Mantova, Curtatone, Montanara and S. Silvestre, and on the twenty-ninth of May, they were attacked by 30,000 Austrians, their own force numbering but about 6,000. After that glorious, but unfortunate campaign, Livi again turned his attention to his studies and completed his education in Florence, under the celebrated Bufalini. He began the practice of medicine sometime previous to 1855, in which year he materially helped to combat the ravages of the cholera in the infected districts of Mugello, Radicofani, etc. This period was also marked by his first literary labors, in the "Relazione sul Colera in Barberino di Mugello." In 1859 his merits were officially recognized, and he was intrusted with the management of the Lunatic Asylum in Siena, and shortly after he was appointed Professor of Legal Medicine and Hygiene in the University. From this time his fame extended far beyond the limits of his own country, particularly owing to his celebrated lectures on "Frenologia forense."

In 1870 he was appointed Superintendent of the Asylum in Reggio, which, by his successful management, became the seat of the psychiatric clinic of the Royal University of Modena, very popular among students of all faculties. Here he also founded the *Revista di Freniatria e di Medicina Legale*, which in a short time took a high place in medical literature. Among the noted writings of this celebrated author are those on "Lypemania stupida," "Paralysis progressiva," "Monomania" and "Capital punishment." Livi's untimely death is deplored throughout the world. His funeral was attended by representatives from all the Italian Universities.

"Non tutti i nomi escono dall'urna
Vale, o illustre per l'ultima volta, Vale!"

—*Gazzetta del Farenocomio di Reggio, July, 1877.*

SAMUEL WARREN.

The decease of the author of the "Diary of a Late Physician," can not be allowed to pass without regretful remark. Mr. Samuel Warren was made Master in Lunacy in 1850, and has not of late years been much before the reading public. His last considerable work was a novel—"Ten Thousand a Year"—but it is by the "Diary" he will be remembered. When a student of medicine at Edinburgh University, nearly half a century ago, Mr. Warren obtained that acquaintance with the more personal aspects of our profession, which he evinced throughout the series of papers in *Blackwood*, afterwards published in the "Diary." It is impossible not to lament the loss of one who will live in memory as a rare exemplar of the art which produces pictures in words.—*The Lancet*.

SUMMARY.

—Dr. Carlos F. Macdonald, Superintendent of the Asylum for Insane Criminals at Auburn, has been appointed one of the Managers of the State Inebriate Asylum at Binghamton, N. Y.

—Dr. John Gerin has been appointed Assistant Physician to the Criminal Asylum, Auburn, N. Y., in place of Dr. Walter Channing, resigned.

—Dr. A. K. Macdonald, who has been Second Assistant in the New Jersey State Lunatic Asylum since its opening, has resigned that position.

—Dr. Richard Koch has been appointed First Assistant Physician to the State Inebriate Asylum at Bingham-

ton, and Dr. E. C. Kitchen to the position of Second Assistant Physician in the same Institution.

—Dr. W. W. Hester, who has been for the past twelve years Assistant in the Indiana State Hospital for the Insane, has been appointed Superintendent of the Kansas State Asylum at Ossawatomie, in place of Dr. A. H. Knapp, resigned.

—Dr. Joseph Workman, formerly Superintendent of the Insane Asylum at Toronto, was elected President of the Canadian Medical Association, at its recent Annual Meeting.

—We recently received an extensive report of evidence given before the Committee of Parliament appointed to inquire into the English Lunacy Law, as to the Security afforded by it against Violations of Personal Liberty. Want of space prevents our noticing it in the present issue.

—The JOURNAL has been delayed owing to the fact that the Proceedings were received at so late a date. We would suggest to the Association whether it would not be better to employ two thoroughly competent stenographers during the session, who could alternate in work, so that the Proceedings could be published in the July number, instead of waiting several months before giving them to the public.

—Owing to the extent of other matter in the present number of the JOURNAL, the reviews of several American Institutions, and of the pamphlets received are necessarily crowded out.

AMERICAN JOURNAL OF INSANITY. FOR JANUARY, 1878.

MENTAL HYGIENE.*

BY JOHN P. GRAY, M. D., LL. D.,

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The classical phrase, "*Mens Sana in Corpore Sano*," is a general and true expression of the related condition of the mind and body for the best functions of human life. Health of body has, in all times, been regarded as essential to the best balance and culture of the mind, and to the most effective application of its activities to the concerns of the world, whether educational or practical, whether in the realm of Philosophy or in the lower plane of Manual Labor. This is true, notwithstanding that there are notable exceptions where great intellectual activity and application have been conjoined with feeble physical structure, and even disease.†

Indeed we must start with the proposition that what is now denominated Mental Hygiene, is practically inseparable from Physical Hygiene. It is comparatively

* Delivered before the International Medical Congress, at Philadelphia, September 8, 1876.

† Dr. Godman, Dr. Robert Hall, the historian Prescott, and numerous other instances might be cited.

a new application of the word hygiene. Dr. Maudsley, in his Gulstonian Lectures for 1870, says: "The time has come when the immediate business which lies before any one who would advance our knowledge of mind, unquestionably is a clear and searching scrutiny of the bodily conditions, of its manifestations in health and disease." *Again, "as physicians, we can not afford to lose sight of the physical aspects of mental states, if we would truly comprehend the nature of mental disease, and learn to treat it with success. The metaphysician may, for purposes of speculation, separate mind from body, and evoke the laws of its operation out of the depths of self-consciousness; but the physician who has to deal practically with the thoughts, feelings and conduct of men, who has to do with the mind, not as an abstract entity, concerning which he may be content to speculate, but as a force in nature, the operations of which he must patiently observe and anxiously labor to influence, must recognize how entirely the integrity of the mental functions depends on the bodily organization, must acknowledge the essential unity of mind and body."*

And the great change which has taken place in the views regarding insanity, within the memory of men now living, transferring it from the domain of mere metaphysics, to the jurisdiction of medical science, as a recognized physical disease, witnesses to the same thing. But notwithstanding this intimate connection of physical with psychological conditions, in the study of mental hygiene, it will not be expected that I should go into the former, or into the field immediately related, of Preventive Medicine, as that whole subject has been assigned to my learned *confrère*, Dr. Bowditch, who has already explored and expounded it in the most exhaust-

* Body and Mind, pp. 1, 108.

ive and satisfactory manner. My range of thought must, therefore, rather be general, and less limited by professional metes and bounds than if it were a strictly medical or a purely psychological one, and may, therefore, not prove as satisfactory to my professional brethren. I shall also be pardoned, I trust, on this National Centennial, if I refer to our own nation largely in elucidation of principles, and for practical illustrations.

This whole subject was formerly confined within the range of philosophy alone. In the days of ancient civilization, before real science was born, when the oracle "know thyself," had only a subjective metaphysical meaning, men like Plato and Cicero placed all mental hygiene in the delights of literary conversation and philosophizing. The Academic Groves were the resorts of dreamy contemplation of a State and a World that never could be realized. The Tusculan Villa was a refuge from the clamor of Senates and the wrangles of the Forum, where Cicero and his friends sought their *otium cum dignitate*, secure from the jealousies and conspiracies of politics, whether Cæsar or Pompey should triumph. They knew little of the physiological functions of the body, while they indulged in their acute and poetical, and sometimes touching, speculations upon the immortality of the soul; but modern science, in studying and dignifying the visible temple of the immortal spirit, has only confirmed and followed in the track of Christianity, which first promised to the human body an equal dowry of immortality with the human soul. The Resurrection staggered the Stoics and Epicureans; but it is at least the best warrant in the diploma of modern medical science, now, perhaps, somewhat disposed to spiritualize even matter itself, to endow it with "the promise and potency of every form

and quality of life." On the other hand, the expression "mental physiology" has been coined to identify the study of mind with that of body, and some would even attempt to resolve all psychology into physiology.

Mental hygiene may be variously classified, but, as a whole, it embraces all that relates to the development, exercise, and maintenance of mental activity in individuals, communities and nations, and must, therefore, be considered from an individual, social, and national point of view. It involves education, social culture, religion and national life. With the individual, it begins at birth, and takes cognizance of even the constitutional tendencies, under laws of heredity, as well as of all the circumstances of subsequent life. To the individual then, in a general way, it consists in that general training which will most perfectly and harmoniously develop the body and the mental faculties for the duties of life. At the outset, therefore, on this point, we are met with the questions, who is the individual? What has he to do as an occupation of life? However we may settle on general principles, the rules for individuals must be special. Practically, we must consider classes and conditions. The occupation and pecuniary condition of parents; their culture, social status, and surroundings; clothing, food and climate; proximity to schools, churches, and places of amusement; density or sparseness of population; laws, government, etc., must all be considered as among the efficient and constantly modifying conditions of any system of hygiene proposed.

Thus, it will be seen, it is a many sided and all-embracing subject, evidently too vast for one, in an address of an hour, to do more than simply glance at its main features. Though it may be looked at from various stand-points, as men contemplate life, its duties, objects and ends, from the work they are doing in the world,

the fundamental ideas must be the same, to lead to any practical results. The views which the minister, the lawyer, the teacher, the scholar, the physician, the scientist and the statesman, may take, will be directed, or colored somewhat, by their field of observation, and their bias of education; but on general principles they must be in accord. Mental hygiene covers all the broad field of human energy, embracing all the professions and every branch of industrial life. It looks after man's moral as well as his intellectual nature, for the two can not be separated. It enters into his domestic and social conditions, and follows him in his duties as a citizen.

I. It first looks at *human nature*—at a man as he is born—his utter helplessness, his passions, his needs, physical and mental, and his social, moral, and spiritual wants, and then must devise a scheme for his development. Is this an easy task? The science that would do this perfectly, must, from the realm of physiology, single out the laws written on his members, and harmonize them, in their development and action, with the laws of the spirit written on the psychological side of his nature, and put these in harmony with the laws of nature around him, in whose realm he dwells, and bring all in obedience and loving accord with the eternal truths of God. Mankind has been working upon this problem ever since Adam first contemplated the tree of knowledge, in the Garden of Eden, and was sent forth to his toil and to his own reflections. It will continue to be a problem, for human nature will not change; the human passions, in all their wide scope, are not to be obliterated under culture, but regulated and controlled. Indeed, the discipline of the passions is, in a large measure, the moral side of this great question. Except for speculative study, there is no separation of the in-

tellectual and moral elements, and the regulation of the passions and their proper development become a part of education.

A fundamental principle, therefore, in mental hygiene, is harmonious, intellectual and moral culture, under the recognition of man's essential nature as a spiritual being. This cultivation is imperative, in order that man may be able to recognize, not only his own needs, but his relations to others; that he may, while taking care of himself, be able to see that he forms an integral part of a social organization absolutely essential for his own welfare. The machinery for the preservation, harmony and elevation of social life, must reach to every class and condition; otherwise, the antagonistic elements would impede, if not prevent, all progress, and engender discord.

Common customs, common schools, and common laws, are the most fundamental, and also the most powerful, equalizing agencies in the great machinery of the politico-social life of a people. Through these means the rich and poor meet on common ground, and acquire a certain degree of unity in physical and mental training, and a certain likeness of character and harmony of thought on the great questions of education, morals, politics, and religion, highly favorable to stability, both social and national. Thus great general principles of government become more readily and universally received, and there are left for difference and discussion only the methods and forms of development and application. Still, these means only partially reach into the home life of individuals, where influences are constantly limiting and modifying development, both physical and mental. Indeed, however distinctly the laws of physical and mental hygiene may be stated, like fundamental propositions in law and morals, their individual appli-

cation may be difficult. The circumstances surrounding and controlling, may not only modify, but entirely forbid, their application; and persons, families, and whole communities, do thus drift away from any regulated plan of life, or any reasonable principles of action, as the history of moral epidemics, not only in the past but in the present, would abundantly show. Poverty and ignorance, the breeders of vices and crimes, and the enemies of culture, may render all principles nugatory, except as they are enforced by law. And in this direction political economy is a most important element in the study of mental hygiene, in its broad application to the interests of mankind.

Thus we see in hygienic science the ideas which lead to the study of pauperism and crime, and the care of the dependent classes, whether made so by disease or misfortune; to the origination of means for preventing social evils of every character; to the enactment of laws for the regulation of morals by limiting vices, as in licensing prostitution and the sale of intoxicating drinks; laws for the suppression of gambling, and providing punishment for the publication of obscene literature; laws to prevent the spread of contagious and infectious diseases; and also that higher and grander step, laws for compulsory education, thus compelling the elevation of the masses by undermining ignorance and superstition, the prolific sources of human misery and degradation. This is itself a wide field of inquiry; a field where Christianity and moral hygiene, social and medical science, and sanitary police, must join hands with education and law, to lift into social order the victims of evil and hereditary influences which they are powerless in themselves either to avoid or to conquer.

That mental activity is highly favorable to physical health and development, when systematically directed

into useful channels, need hardly be argued in this day. Intellectual labor seems, as a rule, to contribute to longevity. It was formerly a sort of proverb, that "one of the rewards of philosophy is long life." The ancient philosophers, especially the Peripatetics, pursued their studies and imparted their instructions largely out of doors, amid the varied objects of nature. The amount of physical exercise taken in the open air was a remarkable feature in the life of antiquity, even among its scholars; and we have among them numerous examples of great longevity in men of intellect. Homer, Pythagoras, Plutarch, Thales, Galen, Xenophon, Carneades, Sophocles, Zeno, Hippocrates, Xenophanes, Democritus, and others, reached the age of ninety and upwards, while the majority of such men passed the limit of three-score and ten.

In the early days of this Republic, with simplicity and plain living, we find the same rule holding good. Chief Justice Marshall and Thomas Jefferson reached eighty-four; Benjamin Franklin and John Jay, eighty-five; James Madison, eighty-seven; and John Adams ninety-one. All these men certainly had not only vast intellectual labors to perform, but great burdens of care, anxiety, and responsibility to carry, and even serious privations to encounter; and we might greatly lengthen this list. Bearing on this point I have recently been informed by Governor Seymour, of New York, who has given great attention to the history and character of the North American Indians, that the more intelligent tribes were not only the dominant and conquering ones, but that they afterwards met the struggle with civilization more successfully than those giving themselves up wholly to physical exercises; that they also maintained a higher physical and mental standard, and lived to a greater age; that these tribes, this day, number nearly

as many as in the early history of this country; that they maintain their language, and largely their simplicity of life, in the midst of civilization.*

The ancient gymnasia, as well as the modern signification of the word gymnasium, bear witness to the sense of the importance of combining mental and physical culture. Mental culture is a powerful influence in developing the symmetry of the bodily organism, the tone and expression of the face, the organs of special sense, and harmony of co-ordinating movements of the whole body. One can see this illustrated in our common schools at any time. The power of attention in the majority of young children, in any community, is not much aroused in ordinary life, and they often look dull and stupid on this account. These children enter school, and the direction of the attention to a few simple exercises, in common, awakens the power of attention; and soon, at the tap of a rule, the sound of a musical note, or the word of the teacher, the whole

* Extract from Appendix to Address by Gov. Horatio Seymour, of New York, at the dedication of the Kirkland Monument, Clinton, N. Y., June 25, 1873.—The superiority of the Indians of New York, over those of adjoining States, is proved not only by contemporaneous history, but by striking facts within our own observation. Their pride, heroism, and victories through a long series of years, affected not only their mental and moral characters, but even their physical organizations. * * * Beyond the evidences of their superiority to be found in history and science, we have living proofs of the vitality and vigor of the Iroquois. All others of the Indians, who once lived in the States lying east of the Mississippi, have been swept away, except a few who linger in the wild regions south of Lake Superior. None of them have withstood the power and influence of the whites, except the Iroquois. The Mohawks went to Canada, during the Revolutionary War, and most of the Oneidas removed to Wisconsin about forty years since. The other tribes still live in New York. In all their homes they are surrounded by the whites, and by high civilization, yet their numbers do not diminish at this time. For a while after the whites went among them, they fell off about one-third in population, but they now hold their number, with a slight increase in some cases. But the strength of their character is more strikingly shown by another fact. Although the Indians of New York, for three generations, have lived in the centers of civilization surrounded by a dense white population, with whom they are in constant contact, as their reservations

school instantly responds. Now, under such simple but common and systematic exercises and study, the whole expression of the school changes. The bodily organism soon conforms to the habit of attention and to the systematic mental training, and awkwardness and dullness are soon transformed into gracefulness, courtesy and intelligence.

Another common illustration is the change we mark in servants under the training of intelligent masters; under simple example and the stimulation of mind in the direction of systematic attention to duties, how quickly they are transformed, if they have any reasonable degree of capacity. The same may also be said of soldiers. Hume, in his *Essay on National Character*, says: "The human mind is of a very imitative nature; nor is it possible for any set of men to converse often together without acquiring a similitude of manners, and communicating to each other their vices as well as their virtues."

are small, yet they retain their own language, their own customs, and about one-half hold their old religious faith; yet they have white teachers and preachers who live among them. In sermons or addresses, they must be spoken to in their own tongue, or through interpreters. At the celebration of the Kirkland Monument, a deputation of Oneidas was present. They belonged to a small remnant of their tribe, numbering less than one hundred and fifty, who did not go with their people to Wisconsin. They and their fathers and grandfathers always lived in the heart of New York, in the vicinity of large cities and villages. The tract of land they own contains but a few hundred acres, yet those present at Clinton, who were well-dressed men and women, could only speak to the assembly through an interpreter. In private conversation, with a few exceptions, they speak the English with hesitancy, as their thoughts are all conceived in the Indian language. The whole world is sending representatives of every lineage, language, and nationality to our country; all of these in a few years speak our tongue and adopt our customs, and in a little time are assimilated in all respects with our people. Even the most stubborn races of Asia yield to our phases of civilization. There is not in ethnology a more extraordinary fact than the resistance for more than a hundred years of our influences by this little band of natives. The continued existence of the Iroquois, while their kindred tribes have been swept away, and their resistance to our language and mode of thought, while all other lineages in our land have been assimilated, give proof of the vigor and marked peculiarities of their race.

The great power of mental activity and attention, in modifying expression, bodily habits and movements, as well as general manners, may not only be seen in individuals and schools, but in whole communities and even nations. This is far more than imitation, it is substantial individual culture, the development of all the faculties in more or less symmetry. If we were asked the secret of the physical prowess and conquering power of the Roman people for a thousand years, we should answer it was the military education and discipline of the *whole* population from seventeen years of age, with its stern system of self-restraint and self-regulation. It was a civilization based upon the rigorous principles of the Lacedæmonians, rather than the lighter and more artistic life of Athens. The modern meaning of the word *virtue* was the *cause* of its Latin meaning, as confined to the behavior of men in battle, a stern temperance and self-control behind unflinching courage and endurance. It was once said by an American orator* that Rome was thrice mistress of the world, by her arms, her religion and her law. It is in the last only that she retains supremacy, for there is hardly a civilized nation in which the maxims of Roman civil law do not form the basis of equity. And this is all the result of the primitive training of that great people both physical and mental. The same principle was illustrated in the Puritan Cromwell's troops, the soldiers of William the Conqueror, the German armies of Frederick William in the Franco Prussian War, and conspicuously in the Revolutionary patriots of America and in their descendants, the soldiers on both sides of the contest in the recent war of Rebellion, in this country.

The more we examine into this question of mental hygiene the more it seems to resolve itself, on the men-

* Hon. Hugh S. Legaré, of South Carolina; N. Y. Review, 1841.

tal side, into a statement of the best methods of education and training to secure the highest and truest culture. And this is the line of thought which forces itself upon the mind as the true exposition of the words mental hygiene—a system of culture embracing all the interests of man in all his relations of life; education in its highest expression and broadest application; education to secure not simply a knowledge of man, and of nature and her laws, and the awakening of the faculties to a deep obedience which will make man reverence *her* in all *her* works and ways, or, in the beautiful language of Prof. Huxley, “the instruction of the intellect in the laws of nature, under which name I include not merely things and their forces, but men and their ways, and the fashioning of the affections and the will into an earnest and loving desire to move in harmony with these laws,” adding “for me education means neither more nor less than this”—clear emphatic words of which no one can mistake the meaning; but far more than this, we should demand a broad and deep culture of man which would do all this, and which would also awaken in the soul a full consciousness of its responsibility to One by whom all things exist; an education which would not only raise man to harmony with the laws of nature, but which would also raise him to obedience to the laws of God; which would make his life, real, earnest, pure and useful. To accomplish this, mental hygiene must include, therefore, not simply the mental and moral training in a general, but also in a particular way; must as well include social restraints and duties, as I have heretofore indicated, and embrace a supreme regard for the welfare of the country—a true patriotism.

It is not out of place in this centenary year of the nation, to remind ourselves that this element of moral

and religious restraint and discipline, this spirit of subjection to an overruling power above nature, was not left out of the practical life and training of its original founders. The first settlers of this continent began their conflict with wild nature, and still wilder savages, under a system of self-discipline and sense of religious responsibility, sterner even than that of the old Romans. It was indeed their *virtue* that brought them through successfully in their contest with the mightiest empire of Europe, and enabled them to lay the foundations of a governmental fabric which has been the astonishment and the study of European statesmen.

But to follow up the subject of mental hygiene in relation to individual life, it must be evident that I should have to enter into details not possible in such an address as this; I should have to take into consideration, not only the whole scope of what I have denominated, in a general way, educational means and influences, including domestic life, but also age, sex, civil condition, heredity, passions, the influence of climate, social customs, religion, etc., in all their varied relations as found in action in individuals, as also the questions of food, water, exercise, air, sleep, etc., all essential conditions and vital questions in the study of individual hygiene.

II. When we come to the question of mental hygiene in communities, we include all hygiene as to individual life, and at the same time enter the wide domain of sociology or social science. Here again we meet the great problems of education, social customs and laws, intermarriage, amusements, and indeed all the conditions of social and civil life, together with religious culture, which, though I have named it last, is really first and fundamental. In this age of books and think-

ing no man can ignore this latter point, if he would. While I have never been able to see any conflict between Science and Religion, certainly the tendencies of the times are rather to question closely their relations and their respective domains. Christianity has been challenged by science, in some quarters, and the old questions of faith, free will, responsibility, necessity, etc., are again discussed in the light of increased physical knowledge and physiological investigations, and the more advanced views of psychology.

The literature of the age itself illustrates the subject of mental hygiene. Bulwer, in his "Caxtons," gives an admirable chapter on the hygiene of books. He suggests that reading should be governed by the mental state; that it should be suited to the morbid drift of thought, or the malady of the individual. As an illustration, he speaks of the folly of attempting to amuse a man in the midst of a great sorrow; and nothing could be more in accord with sound psychology. Referring to Goethe taking up the study of science, after the death of his son, he says, "Ah! Goethe was a physician who knew what he was about. In a great grief like that you can not tickle and divert the mind." He recommends for the sorrows of middle life and old age, "bringing the brain to act upon the heart." He would thus have philosophy lead and temper the emotions and the will, and enrich the true life by contemplating the lessons of experience. He says: "For that vice of the mind, which I will call sectarianism, not in the religious sense of the word, but little narrow prejudices that make you hate your next-door neighbor because he has his eggs roasted, when you have yours boiled, and gossiping and prying into people's affairs, and backbiting, and thinking heaven and earth are coming together if some broom touch a cobweb that you have let grow

over the window-sill of your brains—what like a large and generous, mildly aperient dose of history! How it clears away all the fumes of the head * * * how your mind enlarges beyond that little feverish animosity to John Styles!" Here we have a strong hint, not only against the cultivation of a narrow range of thought, but also of the great value of that wide mental scope which takes in the interests of others, and occupies the mind in public and social interests and affairs of State.

Again he says: "I remember to have cured a disconsolate widower, who obstinately refused every medication, by a strict course of geology. I dipped him deep into gneiss and mica-schist. Amidst the first strata, I suffered the watery action to expend itself upon cooling crystallized masses; and by the time I had got him into the tertiary period, amongst the transition chalks of Maestricht and the conchiferous marls of Gossau, he was ready for a new wife." But all men and women can not grasp geology. No, but all can find, in morbid states, some serious mental occupation, if it be only their own sphere of labor, or some useful course of reading which will occupy them *out of themselves*; this is the secret, *out of themselves*. This would be substituting action for mere sentiment, a most important principle in mental culture. No lesson is more important than this, and it gives emphasis to what all experience teaches, that in the substantial realities of life are to be found the true sources of healthful mental discipline and growth; that while amusements are useful as recreation *after* toil and responsibility, they are not to be looked upon as the daily pabulum of the individual or of society; that, in excess, amusements become a kind of dissipation which creates a distaste for systematic and useful labor, and for the quiet of

home life and its practical duties, and for all rational social intercourse. Thus real life grows tame and insipid; a constant, restless desire for excitement is substituted for the deep, solid stimulus of duty, of domestic responsibility, and of that substantial mental culture which alone can give to society strength and virtue.

Sentimentalism is a tendency of the age, and has a most important place, but it should not become so dominant in social life and in education as to exhaust the mental energy in trivialities, or in mere expression of the feelings, instead of leading it to action and duty. Mere sentimentalism, whether in social life, religion or politics, demoralizes and emasculates all life and action; it is but a sensual indulgence at the expense of all vigor and energy in the practical advancement of the individual or of society. What the school of sentiment, as headed by Rousseau, did for France—the extravagances, the follies and the fanaticisms to which it led—is patent enough from French history since the Revolution of 1789. By sentimentalism is here meant that exaltation of the feelings and sympathies of the mind which is always expending itself upon unworthy objects or causes, or in the mere contemplation of those that are worthy; which Butler, in his *Analogy*, has pointed out with great psychological penetration, as mere emotional impulse, with no practical object, and no outlet for reasonable action, and which is, therefore, always enervating and destructive to mental character.

This tendency is not found simply in the immense indulgence in novel reading in these days; in the graphic and picturesque portrayal of crimes and social vices; in newspaper serials, which flood the country, and which are brought before people at every bookstand, and in all the avenues of travel; in the publica-

tion, broadcast, of the minute details of crimes, suicides, and court trials, where sickly sentiment, and social vices, and the passions of mankind, become the staple and the sum; but this tendency is also seen in science and in much quasi-religious teaching, as well as in a multitude of so-called social and humanitarian schemes which promise to lift man into a realm of thought and feeling where he will necessarily, as by a law of his being, drift to the good. This spirit of sentimentalism and restless love of novelty is only a form of skepticism, and drifts into sensualism in morals, into useless and vague speculations in science, and into transcendentalism and infidelity in religion, and in all its tendencies leads to morbid, unhealthful, and impracticable mental action.

Carlyle has said that "the proper task of literature lies in the domain of Belief, within which, poetic fiction, as it is charitably named, will have to take a quite new figure, if allowed a settlement there," and that "the exceeding great multitude of novel writers and such like, must do one of two things, either retire into nurseries, and work for children, minors and semi-fatuous persons, or sweep their whole novel fabric into the dust cart, and betake them with such faculty as they have, to understand and record what is true, of which there is, and ever will be, a whole infinitude unknown to us;" and he adds, "poetry will more and more come to be understood as nothing but higher knowledge, and the only genuine romance for grown persons, Reality."

Bulwer, with a sort of prophetic fore-glimpse over the field of these developing tendencies, speaks in the chapter already mentioned, of "curing a young scholar, at Cambridge, who was meant for the Church, when he suddenly caught a cold fit of free-thinking, with great shiverings, from wading out of his depth in Spinoza."

He failed when he tried him on the divines, but succeeded by dosing him first with chapters of faith, in Abraham Tucker's book; then strong doses of Fichte; after these the Scotch metaphysicians; ending up with a plunge bath into certain German transcendentalists. He adds, "having convinced him that faith is not an unphilosophical state of mind, and that he might believe without compromising his understanding, for he was mightily conceited on that score, I threw in my divines, which he was now fit to digest, and his theological constitution since has become so robust that he has eaten up two livings and a deanery." Now "wading out of his depths in Spinoza," is admirable. These youths are now grown quite numerous, and count among them some of the ablest scientists, who seem to be carried away by "winds," or by "doctrine," into what St. Paul styled, in his day, "science, falsely so-called." They drift so far out as to get into what they call the "unknowable" and the "unthinkable," which phrases, if the veil of time was removed, would disclose underneath the inscription of the Athenian philosophers on a certain altar, noticed by St. Paul, as he entered that learned city eighteen hundred years ago.

If we look through the history of such mental drifting, we can not but recognize it as productive of vast evil. Certainly such speculations have, as yet, made no scholar wiser or better, judging by what they have imparted to the world on the subjects of Christianity or Revelation. To be sure, we are aware that doubt has been even dignified as an essential condition of mind for the highest perception of Truth! Now the mental hygiene suggested by Bulwer was as admirable as his diagnosis. He did not strand his patient, at the start, by discussion and dialectics, but led him by a line of thought, natural to the patient, through the

regions of apparent contradictions and doubt, according to his powers of mental digestion, and finally cultured him to the full truth, and at length made a Dean of him, where he had the widest scope for faith and works, as well as a field for mental action in the highest range of human duty.

A most notable instance of this "wading out" is the case of a late president of the British Association. A brilliant man, with rare powers of analysis of physical facts and phenomena, his mind trained in this direction, he launches out on the track of the great spiritual ocean, to which he applies his physical tests, and fails. He is followed instantly by another brilliant mind in physical science, who takes down his system of astronomy to follow the wake of a new leader. These are conspicuous cases, and in other times the former might have become the founder of a sect; but instead of that, his structure falls to pieces as he contemplates it. Besides, he confesses that he has *moods*, which is equivalent to unsoundness, when moods are confessed in explanation of statements and opinions. This is encouraging, for it shows that the great and constantly increasing body of truth, extended in all directions, is not only unmoved by skepticism, but is gradually undermining it by explaining the phenomena on which it rests for the title of its existence, and is also revealing principles so much mightier and broader than man's theories of Nature and of God, that Skepticism dies in the light of Truth.

Newton, after reaching far into the arcana of nature, and finding his vast knowledge so little of the whole that he compared it to a few pebbles on the shore of the ocean, is the modest but grand symbol of true progress. He illustrates the majesty of science, and her respectful homage at the feet of the Creator. That

science which is "puffed up," and which stands ready to unveil the sanctuary, and to enter into the holy of holies and reveal the Almighty to man by chemistry and telescope, and thus find out the secret of his creation and existence, and discover the government of the moral world in a series of correlated forces, is not the science of religion which can captivate the world of to-day. However man may move in a cycle of the same truths and deceptions, in kaleidoscopic variation from age to age, God is unchangeable, and has declared Himself to be "past finding out."

So principles are eternal, though our methods change. The ideas of God, in ancient philosophy, which Pythagoras and Socrates, Plato and Cicero, saw dimly through the body of science and truth then developed, can not, at this day, be accepted as religion, though their faith and loyalty to an invisible Creative power stand unquestioned, and like a rock in the desert of centuries. Though Plato is perhaps the grandest figure standing forth in the history of human mind, his theories are but as the dawning light to the mid-day sun, in the abstract truths, developed science, and revelation of to-day. Much less can we accept Democritus and his followers. When Horace sang of the "*Integer vitæ, scelerisque purus*," he but struck a glimpse of the same truth which belongs to the province of religious culture, and which had long before been uttered by the Royal Psalmist, "Blessed is the man who hath not walked in the counsel of the ungodly, nor stood in the way of sinners, nor sat in the seat of the scornful, but his delight is in the law of the Lord." The psalm of Horace and the psalm of David are alike devout confessions of the blessedness of purity, and are tributes to the importance of moral culture as an essential to the full development of mind and mental balance.

Indeed, without this moral culture, we may say, it is well nigh impossible to understand even Nature herself. Certainly this is so, as far as the ideas of purpose and design are concerned. As Baring Gould has well put it, the world is a visible exhibition of the ideas of God, a mighty book to be read. But who is to spell out this Created speech and comprehend its significance? Those who are to catch and understand the ideas of God, must have a spiritual nature capable of perceiving such truths. "Therefore, he who is to read Creation, must be neither mere spirit nor mere body, but must have a spiritual nature combined with a corporeal nature, so that, through the things revealed to the mind by the bodily senses, the thoughts of God may be perceived." Mental hygiene or culture, from this standpoint, recognizes the essential nature of man as a spiritual being, and points to the necessity of educating his moral nature in harmony with his intellectual, to bring forth the full man.

In this view the very wastes and solitudes of nature come to have their moral and spiritual uses. In a burst of enthusiasm, Baring Gould exclaims: "The time of Alpine snow has come; age after age has seen it powdered on the mountain peaks, slide down the flanks in ice, and flow away in rivers to the sea, unesteemed save for the water it yielded. But its time has come, its value is known. There is no medicine to a weary brain, like the golden light on a distant bank of Alpine snow * * * * I remember a mountain scramble leading me suddenly from rough rocks and sear grass, upon a dell of rich greensward, girt about with pines. Set in the turf was here and there a fallen star—a yellow anemone; on the rocks the carmine Alpine rhododendron was in full blaze of blossom, and over all the sward was a tender bloom of forget-me-not. Overhead burnt

a glacier in the summer sun, and a thread of silver fell in powder from it, waving in the soft air. I am not ashamed to tell you that that vision filled my heart to overflowing. God spake through that scene, through every flower, out of the mountain, out of the ice. The voice of God, walking in that garden, was as audible as of old in Paradise, when Adam heard it in the cool of the day."

No reflecting man can fail to see that the attention given to education, all over the world, is a most significant fact in the history of this period. That education, in some degree, shall be universal, seems to be a common sentiment. That this is essential to the progress of civilization, needs only to be stated. The great questions that arise are, what shall education be, and what shall it include? Shall it include religious instruction in all fundamental training? is the real problem, however the question may be stated. And reaching higher in the scale, the same great question intrudes itself, only in a different form. The scientific theory of culture, set forth by the school of which Professors Huxley and Tyndall are exponents, as Principal Shairp has so well pointed out, gives little account of, and makes no provision for the moral elements of human nature, and this would seem to be its deep defect. As he truly says, "the knowledge of the highest things, those which most deeply concern us, is not attained by mere intellect, but by the harmonious action of understanding, imagination, feeling, conscience, will—that is, of the whole man—reason in its highest exercise, intelligence raised to its highest power." And this for the single reason that no science can call our *whole* nature into play at once. This can only be done by religion, which alone calls upon the whole of man. When Prof. Huxley presents life as a game of chess,

with an invisible player, he endeavors to save the idea that a man *must* respect the rights of others; but there is no more room for such an idea in his scheme than there is in a shipwreck, or in Darwin's doctrine of the survival of the fittest. It is *not* a *natural* impulse of man to respect the rights of others, or "to love one's neighbor as one's self;" as Principal Shairp has well said, it requires the whole weight of Christian motive to do either.

III. When we come to examine mental hygiene from a national point of view, we see that it comprises all that gives intelligence, character, dignity, progress, and stability to national life. In this greater field the lesser are included. That hygiene which tends to elevate a people both mentally and physically, by a true and rational culture, is in fact mental, moral and physical training, resting on definite principles, and these so accepted as to become the prevailing and growing habit of the people; or, in other words, culture extending itself into national habits, thoughts and pursuits. Whatever theories we may adopt as to the equality of man, the best practical result of national training must be to give to each class of minds that bias which will serve to develop useful individual tendencies, and at the same time, in the main, correspond with its social status. For whatever general education or fundamental culture we may rest upon as a prescribed system for general application, the professional man, the merchant and business man, the mechanic, the farmer, the clerk and the laboring man need different training to fit them for practical life. The question of mental hygiene is therefore not simply how we may best train men so as to cultivate mental health and physical vigor, but also how we are to bring about the use and application of all the principles and agencies which are best adapted

to develop, expand, and maintain in balance the mental and spiritual life of individuals, communities and nations, so as to insure progress in civilization, a healthy state of general and domestic morals, and, at the same time, the advancement of culture, arts and industries.

It is only within a comparatively short period, that the study of general and mental hygiene has been demanded, under the progress of science. This study has been stimulated by the developing necessities of civilization, the greater attention to sociology, and the progressive ideas of personal liberty and responsibility. All the ancient civilizations were but little concerned in the welfare of the individual, as a unit going to make up national life. Knowledge and the exercise of governmental functions were confined to the few. The great masses were only so much brute force, or mere physical elements, in the hands of rulers and leaders, to carry out their own ends; and to all this the masses gave almost absolute assent. The lives of the people were held cheap by the rulers, as well as by the people themselves. Even the great revolutions, from time to time, were not movements of the people, but were simply brought about by kindred though antagonistic governing families, and the people were used in their respective interests, being aroused under the temporary stimulation of the passions of the hour. They had no appreciation of the ultimate tendencies of public movements, and no hope or desire for personal elevation or advancement. In such a state of national life, mental culture could have no wide significance, and no place except among the learned, as a mere subject of contemplation. Therefore for many ages we have little on the subject of mental hygiene, in any direction, beyond the philosophic declarations and fables of learned men. The priestly orders, indeed, in ancient times combined

and exercised largely the professions of minister, teacher and physician, and were also the trusted advisers of kings. The Mosaic law laid down the rules of hygiene, as it did those of morals, intermarriage, and worship, in a single code.

The aphorisms of Hippocrates embrace about all that is valuable in medical literature of the pre-Christian centuries. The Code of Health of the School of Salerno, for hundreds of years a medical classic, contains the recorded knowledge on the subject of health down to the sixteenth century. A recent translator, Prof. John Ordronaux, says of it, "It was for ages the Medical Bible of all Western Europe, and held undisputed sway over the teachings of its schools, next to the writings of Hippocrates and Galen." It contains a great many precepts and dietetic rules, but deals little with mental hygiene; and this is the sum:—

"Salerno's School, in conclave high, unites
To counsel England's King, and thus indites:

If thou to health and vigor wouldst attain,
Shun weighty cares—all anger deem profane,
From heavy suppers and much wine abstain,
Nor trivial count it, after pompous fare,
To rise from table and to take the air.
Shun idle, noon-day slumber, nor delay
The urgent calls of Nature to obey.

These rules, if thou wilt follow to the end,
Thy life to greater length thou mayest extend.

Shouldst Doctors need? be this in Doctors' stead—
Rest, cheerfulness, and table thinly-spread."

The author closes with a valedictory which would indicate that he felt he had accomplished a great work:—

“The Flower of Physic endeth here its strain ;
The Author, happy o’er his garnered grain,
Prays that in Heaven there be prepared for him
A seat near Christ, and His blest Seraphim.

Amen ! ”

We must not forget, however, the great services rendered, during the dark ages, to Science and Literature by the Monks and Religieux while buried in their cloisters, as well as their work in preserving the treasures of learning from the all-surrounding devastation.

It is admitted by all historians that, in days of violence and anarchy, the Church was a defence and refuge of the poor and the oppressed, as well as of the learned, against the hand of tyranny and rapacity. To the Benedictine orders, at least in their constant and systematic attention to the cultivation of the soil, and the implements and improvements of agriculture, we owe a great lesson of that primitive truth, that in the sweat of man’s face shall he eat bread. It may even be said that the motto of this order, *laborare est orare*, has become the watchword of modern civilization, for in no period of the world has labor been so dignified as in these times, and the machinery of labor so multiplied for the uses of man.

Mental hygiene, from a national point of view, would also cultivate in the people a harmonious and universal aim towards elevated and yet practical ideas. A national sentiment, fostered and dignified by government, in favor of education, mechanics, agriculture, arts, becomes a most powerful mental stimulant to individual effort, and seems to give breadth, tone, and vigor to

national mind and character. No people, perhaps, ever gave more earnest and practical attention to educational power and the value of morality, as elements in government, than the Puritan stock of New England. From the first, the church and the school-house rose side by side, and whatever economy and frugality they exercised in affairs, and they were marvels in these virtues, they never stinted the head and the heart. They had lofty ideals, and they practiced stern virtues, and when national oppression came they had stout hearts, willing hands, and clear heads, to offer in the struggle for liberty and the founding of a nation. The sentiments of Union and Liberty, early and deeply rooted in the mental soil of the early inhabitants of the American Republic, have propagated their influences and spread their roots and fibers through the blood-soil of children's children, and we see the result in millions of active, intelligent minds, carrying forward with united and persistent purpose the vast interests of this great nation, and subduing this mighty continent, in its multiplied physical resources, to the utilities of mankind, as though governed by a single national impulse.

The founders of the Republic, in every part of the land, seemed to have been thoroughly permeated with the spirit of personal and public duty. With them, Liberty meant Law and obedience to principles of Justice—an obedience, as beautifully expressed by Ruskin, “chastisement of the passions, discipline of the intellect, subjection of the will, fear of inflicting and shame of committing a wrong; respect for all who are in authority, consideration for all who are in dependence; veneration for the good, mercy to the evil, sympathy with the weak; watchfulness over all thoughts, temperance in all pleasures, and perseverance in all toils.”

Had our ancestors cultivated the softer graces, and given themselves up to games, sports, and ease of life, and the government contented itself with hereditary dignities, leaving the mass of people in ignorance, and to think and act only in the narrow sphere of providing daily bread by daily toil, how different would have been the mental status of this nation to-day! If, on the other hand, the inhabitants of this country should ever become so demoralized and degraded as to find their contentment, like the people in the latter ages of Rome, in material comforts alone—*panem et circenses*—mere bread and amusements—then, too, like the later Romans, they would soon become the prey of family feuds and contending factions, ending in the despotism of a swift succession of flagitious rulers, till the whole political system would sink into final disintegration and ruin.

This Centennial, a part of the movement of which this International Medical Congress represents, is a great national thought, and a most powerful influence in stimulating national mind, as well as individual, in the direction of healthful mental activity. Indeed, it is itself a vast and far-reaching means of culture, which touches a responsive chord in nationalities of the most diverse social and political character, but nevertheless in harmony in the one direction of progress. To impress men by such magnificent displays of wealth, mechanism, and art; to show them that life is more than meat and drink; that a nation is great and powerful in proportion as its citizens are cultured to refinement, utility, morality, and personal responsibility; that these constitute the foundation stones of national greatness and prosperity is, in itself, a great national hygienic measure. As the accumulation of patrimonial treasures, learning and office, give dignity to families,

and stimulate to higher culture, so the accumulation of treasures of all kinds, and the recognition and cultivation of art and learning by nations, tend to dignify national reputation, and to stimulate citizens of all classes to higher efforts and more patriotic lives.

Thus a nation secures mental and moral growth and breadth of enterprise. No one can look at the wonderful Exposition, now held in this city, without realizing this fact. The world seems, indeed, to be here assembled. The Egyptian, the oldest civilization, stands before us to-day as it stood in the days of the Pharaohs. The march of progress and the attrition of nations may have modified her national life in some outward things, but the central ideas remain the same; her escutcheon is unchanged, and she sends to this Centennial, as an essential treasure, the head of Rameses, thus typifying her original and perpetual dignity, unbroken through the long tide and flow of centuries. And so down through the roll-call of nations, to our own, each has its own grand representative idea. At the end of a hundred years we stand at the statue of Washington, and relate his virtues, as embodying the central ideas out of which grew, and on which rests, the deep, broad and sure foundation of this Republic. Egypt may come to us; she may take our ploughs and reapers, our engines and printing presses; but she will only enthrone Washington when she accepts our ideas.

The true greatness and dignity of any nation will always be measured by the standard of its mental and moral culture, not simply by the intellectual standard it presents in its military power, its science and arts, and its dynamic forces, but also by its will and capacity for morally elevating its citizens, without clash of caste; maintaining universal freedom, with all men equal before the law. The present Emperor of Russia,

realizing such a sentiment as essential to the dignity, prosperity and permanence of the government, transformed, in a day, millions of serfs into freemen, the grandest ukase in the history of time. This is the substance of Magna Charta, the glory of England. This was the ostensible aim of Cæsar. His memory is quite as much dependent on his philosophic culture, and his assimilation to the people, as on his conquests. He shed lustre on Rome, and on mankind, by his amazing combination of simplicity, learning and statesmanship, with the greatest capabilities of a soldier, all of which he illustrated in the midst of a galaxy of the most magnificent minds in the annals of the world. His name fitly represents the power of mental culture in the direction of definite ideas, in a ruler looking to the elevation of a people as the true source of national power.

Rome lost in prestige when she accustomed her people to ideas of conquest and personal ease, above moral culture, in its wide meaning. Indeed, no nation has ever maintained permanent elevation and power, which has encouraged or permitted public opinion to act outside of the pre-ordained boundaries of religious truth. The belief in a God must be the corner-stone on which a nation rests. Both Greece and Rome flourished in power, arts and arms, so long as they clung to a belief in a supreme Providence, above Nature. But when the speculative philosophy of Epicurus and Lucretius, with its absorbing sensualism, usurped the ancient worship, they perished beneath the blight of a cold skepticism. The glory of Egypt was clouded with Cleopatra, who represented deified sensuality on the throne of a Nation. The great Assyrian Empire, in like manner, fell under Sardanapalus, the gilded monarch of Asiatic licentiousness. France well nigh perished when she installed the Goddess of Reason in the seat of Worship, and her Chief Assembly voted Death to be an Eternal Sleep.

Under the cultivation of ideas, and the practice of the principles, to which I have referred, by the founders of this Republic, we have the national fruit, not only in a great and well-established nation, but conspicuously in the wonderful development of the resources of high civilization all over this continent. It is a truth, well worthy to bear in mind always, that education, with them, embraced ideas of religious freedom, which were cultivated together, no matter what the calling in life. And it is not too much to say that in the rigid spirit of utility and the high sense of responsibility of the early fathers, we have the seed from which has germinated, over this broad land, the personal independence of character, the inventive genius, the subjection to law, and the matchless energy, which have made us equal in power to the older nations of the world, which have also given us an individual national character—stamped us as Americans—withstanding that we represent all the nationalities of Europe; which have developed a national mental hygiene which reduces and conforms the cosmopolitan ideas of the vast and constant drift to our shores, to the national standard, which prevents anything antagonistic to the fundamental principles of the government from taking root, and which assimilates and harmonizes all the seeming antagonisms to the genius and spirit of the constitution, the moment they are subjected to its dominating idea, “government of the people, by the people, for the people.”

I might properly allude to the great influence exerted on the national mind by such men as Franklin, Rush, William Penn, Robert Morris, Richard Henry Lee, John Jay, the Adamses, Hamilton, Jefferson, Madison, and others, if there were time; but such influence, however special and potent, was, after all, only the projection and happy presentation of principles which,

when thoroughly impressed, acted on the mind of the people in moulding national thought. The work of these men was done through the reason and judgment, and not by popular display and glamour, and it was abiding. Economics and population, education, statesmanship, finance, constitutional law, Political Economy in all its wide bearings, received from them the most earnest and profound discussion. However great their attention to religion, they did not confound it with state morals; but, on the one hand, they maintained Christianity and the highest responsibility to God, and, on the other, they sought to work out, under laws, the mutual rights and relations of men under their new social and political conditions of government.

Their lives were illustrations of the principles they advocated; William Penn exercised a wide and mighty influence in securing not only the mutual co-operation of savages, but also of classes of men bred in other traditions, and in bringing all to the formation of national habits and character. Yet he represented no victor with temporary plaudits, no sensational or dramatic phase of social life or regeneration. His power illustrates what education, aided by elevation of character and equilibrium of the intellectual life and passions, may do in a man who is controlled by truth and directed by spiritual light. Wilberforce, in England, illustrated the same great influence on national mind. He showed how a strong mind, panoplied in its convictions of universal justice, might gradually undermine historic precedents, against all the forces of conservatism arrayed in opposition, as well as against the apparent interests of the nation. Slavery was then a part of the national wealth, but it died through the influence of this one peaceful mind, breathing condemnation upon it, and this in the very presence of those whose material

relations to it were of the closest character. Thus a whole nation was transformed by a mental revolution, wrought solely in the name of universal philanthropy, justice, freedom and religion.

Such are some of the higher triumphs of national culture, when it embraces the moral and spiritual elements of Christianity. Though this age may be characterized as one of liberal tendencies of thought, in all directions, it has been permeated by the principles of Christianity, and to-day there is more respect for religious truth, and a firmer belief in the necessity, for both man and nations, of faith in a God, than when the century commenced. When, in the recent French Revolution, the Archbishop of Paris, Monsiegnur Darboy, was struck down by the Commune, the nation turned from the act with horror. Yet the Bishop was only a man, and one among the hundreds of noble men who thus perished. But he represented Religion, and millions of people, alike Protestant and Catholic, condemned the deed as one of infamy, and as a diabolical defiance of the very instincts of humanity, as well as of the traditional sentiment of Christendom.

The lesson of mental hygiene, for nations, which we learn from all example, is, not that education and wealth, nor the refining influences of æsthetic art, will suffice for the highest development of national mind, but that, if underneath and through all these are not interwoven the great truths of moral responsibility to the author and upholder of all governments, lifting man above the dominion of the baser passions, the nation dies as an individual dies; for "unless the Lord built the house, they labor in vain who build it."

In the convention at Philadelphia, in 1787, for forming a constitution for the United States, after some weeks had passed in fruitless debate, a proposition hav-

ing been made for daily prayers, Dr. Franklin rose and said: "In the beginning of the contest with Britain, when we were sensible of danger, we had daily prayers in this room for Divine protection. Our prayers were heard and graciously answered. All of us who were engaged in the struggle must have observed frequent instances of a superintending Providence in our favor. To that kind Providence we owe this happy opportunity of consulting in peace on the means of establishing our future national felicity. And have we forgotten this powerful friend; or do we no longer need His assistance? I have lived a long time, and the longer I live the more convincing proof I see of this truth, that God governs in the affairs of men. And if a sparrow can not fall to the ground without His notice, is it probable that an empire can rise without His aid? We have been assured in the sacred writings that, except the Lord build the house, they labor in vain that build it. I firmly believe this, and I also believe that without His concurring aid we shall succeed no better, in this political building, than did the builders of Babel."* The motion was carried.

This illustrates the sentiment and temper of those who founded this nation, and may we not say, standing where we do, that the influence of this illustrious example has had some share in determining the tone and the practice, in that respect, of this renowned University from its foundation, whose successive Provosts have been eminent examples of the essential harmony between the different qualities of Faith and Science? These latter thoughts have come into my mind since entering this hall, while looking round upon the long line of Reverend Provosts speaking out from the canvas, and then reading over the door of entrance the grand in-

* Debates on the Constitution.

scription, "IN HONOREM DEI." An institution, like a State, which writes over its portals, "in honor of God," can not fail of success and power, before the people, as more than a century has here demonstrated. And this is my Alma Mater.

For individuals and communities, the quaint lines of George Herbert, with which I close this Address, are a suggestive and pregnant summary:—

Slight those who say amidst their sickly healths,
Thou livest by rule. What doth not so but man?
Houses are built by rule, and Commonwealths.
Entice the trusty sun, if that you can,
From his ecliptic line; beckon the sky.
Who lives by rule then, keeps good company.

Who keeps no guard upon himself, is slack,
And rots to nothing at the next great thaw.
Man is a shop of rules, a well-trussed pack,
Whose every parcel underwrites a law.
Lose not thyself, nor give thy humors way;
God gave them to thee under lock and key.

ASSOCIATION REMINISCENCES AND REFLECTIONS.*

BY ANDREW MC FARLAND, M. D.

An existence of well nigh the third of a century well entitles this Association to the term venerable. We have seen go from it, generally after lives fully and well spent in this one great department of science and philanthropy, the great majority of those who laid its foundation, and have seen enter it much the larger portion of those now in the privilege of membership. While we doubt not that the new blood and the new brain entering with each year in a constantly increasing stream will preserve all the vigor of the original stock, we may still be pardoned if we look back with something akin to veneration on those who so well laid the foundation on which we build. At the risk of presenting what is familiar to some, we propose briefly reproducing the men and events of this long ago period, in the hope that those who knew not the men, and were too late to share in the events, may gather fresh zeal in the great unfinished work that lies before us all. Incident to the task before us will also be the inquiry, how well this Association has answered its own designed end; how it has performed its duty to society at large; contributed its due share to the philanthropy of the age, and thus vindicated its own lengthened existence.

The steps leading to its organization were few and simple, and are here stated merely as historical data.

* Read before the Association of Superintendents at the annual meeting held at St. Louis, May, 1877.

Its idea was first suggested during a visit made by Dr. Samuel B. Woodward, of the Massachusetts State Lunatic Asylum, at Worcester, to Dr. Francis T. Stribling, of the Virginia Western Asylum, at Staunton, during the spring of 1844. This pleasing incident reminds us that it is not the first time Massachusetts and Virginia have been united in council for the promotion of designs of the utmost national importance; and that men representing both sections of the country, have been, ever since, firmly united for the furtherance of our common object, may be due, under Providence, to this apparently fortuitous origin. Which of the two gentlemen first suggested the idea may remain forever unknown, but from what we know of the character of the two men, and the zeal with which both lent their endeavor to carry it into effect, the design may be fitly ascribed to either. The result of this conference was that the first meeting was held at Philadelphia, on the sixteenth of October of the same year. The gentlemen present were, Drs. Woodward and Stribling, before mentioned; Dr. Samuel White, of Hudson, N. Y.; Dr. Isaac Ray, of Augusta, Me.; Dr. Luther V. Bell, of Somerville, Mass.; Dr. J. S. Butler, of Hartford, Ct.; Dr. Amariah Brigham, of Utica, N. Y.; Dr. Pliny Earle, of Bloomingdale, N. Y.; Dr. Thomas S. Kirkbride, of Philadelphia; Dr. Wm. M. Awl, of Columbus, Ohio; Dr. John M. Galt, of Williamsburg, Va., and Dr. Nehemiah Cutler, of Pepperell, Mass.; all gentlemen in charge of Institutions for the Insane at their given localities. They represented the institutions of chief note, then in existence in the country. Of these gentlemen only four now survive. It is to be presumed that beyond an organization and assignment of topics for consideration at a subsequent meeting, little would be accomplished; but as we review the latter we are struck by the Cath-

olic and comprehensive spirit in which the Association entered upon the work before it. If it were ever charged that designs of self-seeking, either as individuals, or as a body, had at any time a place in the scope of the Association, the topics discussed from first to last would set such charge forever at rest. Had any such unworthy end been in the least contemplated it would have betrayed itself when the whole field of the future lay fresh and new. The scope of membership was made to include all in charge of insane asylums in the United States; subsequently widened so as to embrace our brethren over the entire continent, and also so as to retain in membership those retired from such controls—both measures of the utmost value, more especially the former, which has brought in a class of membership now well nigh indispensable.

We have alluded to the topics first proposed for discussion, in which the key-note of purpose is best sounded, and by the tone of which the progress of the Association has ever since been strictly regulated. Even at this late day it is worth our while to recapitulate them, as they are so significant of the single purpose had in view. They were, “on the moral treatment of insanity; the medical treatment of insanity; restraints and restraining apparatus; construction of hospitals for the insane; jurisprudence of insanity; prevention of suicide; organization of hospitals, and a manual for attendants; statistics of insanity; support of the pauper insane; asylums for idiots and the demented; chapels and chaplains in hospitals; post mortem examinations; comparative advantages of treatment in hospitals and private practice; asylums for colored persons; provision for insane prisoners; and on the causes and prevention of insanity.” The Association can justly claim credit from its first meeting to the

present, of having as strictly confined itself to subjects bearing on the good of the great interest had in charge, as is indicated in the above list of topics. Discarding almost from thought even, questions of medical ethics, necessarily held in close regard by other medical bodies, accepting in membership all thought worthy by governing powers, of being placed in charge of insane asylums, it has kept its single eye on its ordained work, the best good of the insane.

The second meeting of the Association convened in Washington on the eleventh of May, 1846; and from that time the observations in this paper are those of an eye-witness. It happened on the eve of affairs of some national moment. The day set was Monday, and most of the members were on the ground the Saturday previous. Congress was in session, and disturbed relations with Mexico was the absorbing topic. It became known on Sunday that a Cabinet meeting was being held over dispatches just received, and that an exciting debate might be expected next morning. After calling to order, an adjournment was had to the Capitol to hear the memorable debate, resulting in a declaration of war by a preamble, followed by events which, long after the bitterness attending their first inception has subsided, have given to us and to a higher civilization, a new empire, rich in promise, the idea of which then would have been the wildest dream.

The first President of the Association, by a peculiarity of fitness that seemed to bring him alone to view, was

DR. SAMUEL B. WOODWARD.

Perhaps the senior in years of any present, a man of remarkably striking presence, tall and of full figure, without being corpulent, suggestive, in the mingled grace and dignity of his manner, of President Washing-

ton, to whom also he bore a marked facial resemblance, full of suavity and kindliness of bearing, hardly ever was the chair of any deliberative body filled with greater ability, certainly never with more dignity. His distinguishing merit was to be able to bring out, upon any given topic, all the force of thought present. Discussion got its full vigor under his skillful rule. A suggestive observation often opportunely thrown in, a marked and approving attention to a timid and perhaps hesitating speaker, a habit of easy dispatch of business without show of impatience, these were a few of the qualities which will make Dr. Woodward long to be remembered in the annals of the Association. As an original thinker, as the phrase is used, he did not rank among the first; but he was second to none in the fertility of his mental resources on the multitude of practical questions, which must always engross much of the attention of this body. A discussion was never complete till at its close the glance of the President had swept over all the field traversed, with generally a surprise on all hands at the many palpable points yet untouched, and the wideness of the field that lay beyond.

But it was in his own field of duty at home that Dr. Woodward made his great mark. He almost, of himself alone, constitutes an epoch. The opening of the Massachusetts State Lunatic Hospital, at Worcester, was one of the first waves of a great tide which apparently has not yet reached full flood. It was the first real recognition of the obligation of a State, as such, to care for its insane. There may have been, it is true, some partial recognitions elsewhere, but the broad ground, as we now generally see it, was then entered upon. On Dr. Woodward, after careful selection, devolved this work. His personal traits, already touched upon, and,

above all, his sanguine temperament, worked out the result which every one knows. His reports breathed to the full his hopeful, enthusiastic spirit, abounding in graphic narration of cases, such a kind of presentation as the more severe taste of the present day hardly sanctions, and which indeed is not required. Issued in what was then regarded as large editions, their effect was deep and far spread. The press copied from them almost universally, and the writer of this then living in another State, before even a student of medicine, remembers thumb-worn copies passed from neighbor to neighbor as among the most attractive reading of the time. Many agencies, it is true, contributed to the establishment of State institutions for the insane as rapidly as legislation could act during the ten years after the time named, but any statement of them would be incomplete unless conspicuous place was given to the marvelous pen of Dr. Woodward. Reading these reports now, after all the gathered lights of more than forty years stand between us and their time, we do not perhaps, realize all their force and originality. The scale has wonderfully widened, we are some steps nearer perfection, but when we take into account the progress made up to his time, and that made since, we must allow that he did his work wisely and well. When I mention the name of

Dr. AMARIAH BRIGHAM,

The lamented Superintendent of the New York State Lunatic Asylum, at Utica, the heart of every older member of the Association will thrill with a warmer glow at the recollection of that distinguished member of our specialty. Perhaps without an exception he left every one who approached him deeply impressed alike by his remarkable gifts of mind, and the spotless purity

of his life and purposes, all of which stood manifest in the man himself. Spare in person, of full height, but with a languor of movement suggestive of ill-health, with a voice like music itself, and a smile singularly winning, there was everything in him requisite in a man born to be loved. From the meetings of the Association Dr. Brigham was never absent during his life, attending the last one a little more than three months before his death, September, 1849.

A mind richly endowed had evidently been cultivated with diligent industry. His part in discussion was always full, most fertile in suggestion, and evinced, throughout, the completeness of his devotion to the great work of his life. Whatever the subject, and however incidental, he took it up with a systematic arrangement of its points, that bore the mark of an especial preparation. His happy faculty of condensation held every listener in close attention while he would give a subject a seemingly exhaustive treatment, all the training of his mind, his large experience and the purity of his private character came in to give import to whatever he contributed. This sketch is incomplete in almost its largest part while there is wanting any conception of the quick and subtle play of expression over the fine lines of his face, lighting up the thought as it fell from his lips. While Dr. Brigham may be said to have died at an age when men are usually best fulfilling the promise of life, he has left his mark too deeply traced not to be visible for this age at least. Coming upon the stage a little later than Dr. Woodward, the aims of their lives were much the same. The perhaps unconscious mission of both was to prepare the public mind for the great awakening to the claims of the insane that dates closely on their time. Such active exercise of deed, pen and voice, as marked the whole

life of Dr. Brigham could not fail of much fruit. The AMERICAN JOURNAL OF INSANITY whose vigorous old age reflects so well on its later conductors, is a worthy monument of his genius and perseverance, and that the Institution over which he presided became at once, what it has ever since continued to be, the great training school for superintendents, must be attributed, in great measure to the standard of merit which he set up. If any idea has ever gained currency that those in trust of the interests of the insane have lacked the progressive spirit, have been wanting in quickness to seize upon and adopt every agency to advance them, the special labors of Dr. Brigham in this direction would set such idea at rest. Thirty-two years ago the writer of this paper found him zealously engaged in striving to realize what is even now the highest ideal of the foremost curative agencies in restoring the insane, and making perfect the ends of asylum treatment. Workshops, the academical school, the school in penmanship, the singing school, tableaux and dramatic exhibitions, conversaciones, all were kept up with the ardor given by his sanguine and ever active spirit. No possible means were unthought of and untried, and as he confessedly failed in many of them we may feel that there are limits which no enterprise or fidelity are ever likely to pass.

In approaching the third of the trio especially conspicuous at the meeting referred to, we are reminded that while early privation proves often one of the best foster mothers of talent, this quality does sometimes, nevertheless, gather to itself, and improve to the utmost, all the advantages to be derived from distinguished birth and favorable early surroundings. Conspicuously was this the instance in

DR. LUTHER V. BELL,

Superintendent of the McLean Asylum, near Boston. Hardly any stock, both in this and the mother country, has furnished so many names to the roll of distinguished men in the professions of medicine and the law, as that from which he sprang. Seldom has the time been, during more than fifty years of this century, that some one immediately related to him has not been found in the National Congress. From his eminent father who received in turn every high honor a State could confer, he stood in the same relation of pupilage enjoyed by the younger to the elder Pitt. Nature was also lavish to him in the gifts men most prize. Much above the common stature, the grace of his carriage was marked by a trace of negligence, manifested also in his usual dress. A thick growth of raven black hair literally swept across a brow of almost marble whiteness, beneath which were features which a Phidias might have left as his abiding model of the human face divine, if a native nobility of sentiment and a mind's full culture had been the ideas to be expressed. Education did its utmost to perfect these native qualities. Crowned with collegiate honors while yet in his boyhood, the best training of this country and Europe early introduced him into the medical profession. At the threshold of his career he became a prolific writer on medical subjects. Such a man could not remain obscure. Perceiving that his native State of New Hampshire must follow the example of contiguous ones, in making provision for the insane, he allowed himself to be elected to the Legislature to further the object. But as is often the case, in aiming at one object a higher one in the same direction is reached, it was while thus engaged that he received the appointment to the McLean Asy-

lum, made vacant by the sudden death of Dr. Thomas G. Lee. Never could man and place be better fitted to each other. The Institution, perhaps always with larger resources than any other in the land, and deriving its patronage as largely from the affluent and intelligent, conferred a worthy compliment in his selection. Probably, few men ever rested in a position with such assurances of permanency. The impression made by the man at first sight, the dignity, grace and courtliness of his manners, his voice of deep, mellow richness, which all knowing him remember well, though so difficult to express in words, were in full correspondence with his daily surroundings. To those of us then in charge of neighboring State institutions, a visit to the McLean Asylum, and some hours in the society of Dr. Bell, were like passing from strong fields of rugged toil into a garden of delights. Having to strangers something of the awe-inspiring, and always delicate and fearful of seeming officious, he was, nevertheless, a ready and wise counsellor and a warm and sympathizing friend.

From the sessions of the Association Dr. Bell seems never to have been absent except when out of the country to evade the family scourge of Phthisis Pulmonalis, which pursued it almost to extinction, holding also over him its life long menace. Of his manifold labors, of his lasting discoveries, which have wrought his very name into our nomenclature of disease, it is unnecessary here to speak. They are abundantly recorded elsewhere. His utterances might seem to a listener to have something too much of precision, as if every word was to stand the test of print—as indeed it might have done. But in this there was not the slightest trace of pedantry; it was only the habit of exactitude, almost inseparable from the cultivated scholar. I am satisfied that to

those who fully knew Dr. Bell, who have been intimately drawn within the influence of his great mind and truly tender heart, these terms of eulogy will not seem too high. There is a phase in the closing years of his official life, perhaps never expressed, but nevertheless suspected, that may here be mentioned as throwing its share of light into the recesses of his remarkably self-contained spirit. To his family he was devotedly attached, to his amiable wife especially, to whom his bearing was always peculiarly tender. It has been intimated that he owed much to her winning and saving influence at a critical period of his life. By a rapid succession of bereavements these objects of his love, the wife included, were almost entirely swept from him. We can somewhat understand the force of the blow to one of his temperament. Perhaps it was but a mere coincidence, but at about the same time the phenomena of mis-called "spiritualism" received some of his attention. He approached it strictly in the spirit of scientific inquiry. On more than one occasion some of his observations were communicated at meetings of the Association, but never apparently transcending the ground of the cautious scientist. It may have been only the surmise of observing friends—and it is here given as hardly more—that these investigations, perhaps unconsciously to himself, gave a cast of their own to the closing parts of his life; that there was, despite his always expressed skepticism as to anything supernatural in what he observed and described, a melancholy fascination in inquiries, that, even in the idea brought him into relations with the loved and lost. The effect, at most, was nothing more than to "sickly o'er the native hue of resolution;" but if any of the surmise be correct in the case of one of such strict conservatism as the subject of these remarks, we must believe there are some fields

of inquiry pervaded by an atmosphere perilous to the best mental organization.

In summing up his character we are almost forced into the language of Griffith's oft quoted eulogy,—true of him save only in the haughty spirit implied.

“He was a scholar, and a ripe and good one;
Exceeding wise, fair-spoken and persuading;
Lofty and grave to those who lov'd him not,
But to the men that sought him sweet as summer.”

Prompt to the call for the first meeting of the Association was

DR. WILLIAM M. AWL,

of the Ohio State Institution, at Columbus, then in its infancy. Always excepting the Asylum at Lexington, Ky., which had long stood as a far outpost in the field of philanthropy, the movement of the State of Ohio was one of the first steps following the great awakening coeval with the times of Drs. Woodward and Brigham. Dr. Awl merits a prominent place in the reminiscences of the Association. He embraced its aims and spirit with all the ardor of his enthusiastic character. He made up for the lack of the more shining qualities so conspicuous in those before mentioned by great force of character, much more than ordinary originality, a rare knowledge of the world, keen observation and a soundness of judgment on points brought into discussion, that made him almost invaluable as a member. He was a ready and easy speaker, and always full of most pertinent matter. He was elected Vice-President in 1846, to succeed Dr. White, deceased, and became President in 1848, on the retirement of Dr. Woodward. His communications, chiefly in the course of the discussions, were an important addition to the intellectual store of this body. There were side-lights to his char-

acter that can not be omitted and leave him fully described. Something of humor seems needed to make up any well-rounded character. This quality—irrepressible in him—lighted up his discourse at befitting points with rays especially attractive. A related experience of asylum life, touching on some point in discussion, was quite apt to be set home by a racy anecdote trying to the risibles of all present. Before hospital reports had settled to their present staid level his own betrayed a vein of this quality apparently impossible to be kept in subjection. Some may yet remember a night-ride by omnibus from a visit to the Bloomingdale Asylum, at the session in New York in 1848, when the humor of Dr. Awl was allowed full play. Such an outflow of anecdote, crisp with the flavor of western life, surely never before or since was let loose over a company, till all sides ached to the last endurance before reaching the hotel in the city. Yet, not inconsistently, this quality was associated with a religious character of the highest order. In the fields of Christian and church work he was an active laborer, long an elder in the church of his communion, a pattern in his walk to the end of his days. It must have been a rare steadfastness to conviction, and no ordinary powers of persuasion to the duty of Sabbath observance that could induce a Mississippi river captain to tie his boat to the river bank from twelve o'clock on Saturday night, till the same hour on Sunday. Too early was he lost from our specialty and attendance on our meetings from the mutability not seldom an occurrence in institutions under State control.

The space allowed for this paper forbids extended mention of others, almost equally prominent, who gave their stamp to the designs of this body. It would be an injustice to leave unmentioned

DR. WILLIAM H. ROCKWELL,

of the Vermont State Asylum at Brattleboro, that great master of hospital finance, who not only treated his patients skillfully and administered affairs well, but actually almost built his institution from its first small beginnings. How nearly or quite \$200,000 was actually earned and put into permanent buildings during Dr. Rockwell's time, as appears by the late report of the State Commissioner, and that, too, out of a scale of support rates that would discourage the keeper of a western county poor-house, is one of the marvels of our time. He, too, was a man much above ordinary stature, somewhat rugged of feature, and with something of an embarrassing mannerism of speech, which, however, did not destroy the force of his utterances, which were often pointed and full of practical good sense. Nor must mention fail to be made of

DR. JOHN M. GALT.

of the ancient Institution at Williamsburg, Va., a man always held in high respect by his associates, alike by the clearness of his views and his native modesty of character. And last, but by no means least,

DR. FRANCIS T. STRIBLING,

of the Virginia Western Asylum, at Staunton. As these sketches of individuals are drawn entirely from personal recollection, and little dependent on other sources, it has so happened that the acquaintance of the writer with Dr. Stribling was limited to but two meetings, the attendance of the latter being, unfortunately, somewhat unfrequent. Yet, infrequent as these meetings were, they were sufficient to disclose the source of the almost

veneration with which his name is mentioned, not only through the length and breadth of the old Dominion, but over the entire South. Modest to the extreme of sensitiveness in all things relating to himself, he was a man of clear, positive and independent views on professional subjects. Perhaps the very fact of his comparative isolation gave increased value to the emanations of his much thinking mind. His views were expressed in terse phraseology, speaking always directly to the point, seeking condensation in his matter, it may well be said of him, *non teligit quod non ornavit*. He was one of those who never rose to speak but all ears were turned in full expectation of hearing something of importance, and they never were disappointed. His impress was that of one who thought deeply, independently, and above all, with entire honesty. He was a man of agreeable person, remarkably self-possessed in his manner, and everything about him bespoke the cultivated gentleman in the best sense of the term. All of his character stood expressed on his face, frank, ingenuous, and open as the light of day. He was fortunate in being justly estimated at home, indeed as few men in his peculiar trust have the good fortune to be esteemed; and it is not unlikely that this sketch of him may have received a coloring from the testimony of native Virginians found all over the Northwest, to whom his name seems as a household word, never to be spoken without a tribute to the man.

We have alluded in these sketches to a part only of those who participated in the early deliberations of this Association. Their record is closed, and the work they had to do was worthily finished. Of these yet living we make no mention. Their time for eulogy is, happily for us, not yet come.

It now remains for us to consider, very briefly, what our Association has accomplished during the years of

its existence. Perhaps the most pointed answer to this question would lie in another, what our specialty in this country would have been without it? Necessarily separated from each other by wide distances, meeting only fitfully and by accident, judging of each other through sources of information liable to all manner of misconstruction, viewing each other often through the media of sectional or state jealousy,—is it not probable that instead of the present unanimity of aim for all that is high and progressive, we should witness the same spirit of jealousy and mutual depreciation that too often exists between men of the same calling, who know each other but imperfectly. We are fully secured against all this. From the Atlantic to the Pacific, and from the frozen north to the Southern Gulf, we know each other and what each is doing. Every worthy idea or discovery, every advanced procedure that facilitates, improves or makes in any sense better, becomes at once a common thought, or a common property, available and free for the common use. Such a thing as a better or more successful usage being kept in the possession of any one would be opposite to the entire spirit of this body. The best thought of the best men at once flows into the common stock. Whatever is especially excellent in any one, and recognized as such, becomes at once a standard of excellence to all—a mark set which every one instinctively aims to reach. In our specialty of professional duty the standard of excellence, if supported by no comparisons, is extremely prone to decline. Human nature, as embodied in the individual, is not proof against this lapsing tendency. It needs the constant spur of example. Who does not return from a session of this body with a higher sense of obligation to duty, with a spirit of determination to carry into effect all possible of the harvest of thought with which

every meeting is more or less fruitful? It is this annual rekindling of the fire of professional zeal that has placed our institutions for the insane in the front rank of all Christendom.

The salutary usage of changing the place of meeting each year, to a locality remote from that of the preceding, carries into all the important centers of influence in the land, at one time or another, the spirit it aims to promote, and the result invariably has been that a lasting good influence has been left behind. Local pride everywhere dreads damaging comparisons, and the approval or censure of this body of anything within the range of its proper judgment, must have weight in correction of an evil, or a stimulus to the further good, well nigh irresistible.

By a comparison of the observations of men in the most distant extremes of the land, we are enabled to see how the development of mental disease is modified by climate, by hydrometric conditions, by states of society and the origin and composition of different races of men.

By almost annual reports from individual members of recent, and sometimes extensive visits to the institutions of other countries, we are kept *en rapport* with the best minds and the best means, there existing, for the promotion of the objects for which we labor, in common with them. Happily for the age we live in, science and humanity are of no country—they link hands across oceans, and keep step together, animated by one voice. Through practical tests, reliably made by so many, we have been enabled to arrive at correct views of the principles and details of hospital construction and organization, so that, if any fair field is given, the mistakes of the past need not be of further occurrence.

By frequent and exhaustive discussions, embracing all possible points of the jurisprudence of insanity, we have been brought to substantial agreement on every principle, or the bearing of any state of facts, as they arise in courts of justice. If there are yet remaining, complaints of the bearing of expert testimony, as its province is entertained by this body, we are confident it is not a fault of these principles, in themselves, but rather of imperfection of legislation, or the failure of courts to assign to them their well-defined and proper place. Finally this Association has steadily pursued the object of its formation, and its ends have been abundantly reached. It has presented the noblest incentives under which men can act. It has stimulated the loftiest ambitions, it has kept pure and unsullied the most philanthropic purposes. It is the furthest possible remove from a "guild" to promote selfish ends. If it has ever essayed to encourage legislation in any given direction, that direction was indicated by the best of experience for the good of objects concerned, and if it has promulgated opinions, it has never been done in an *ex cathedra* spirit. As it has been, so it now is, and so we trust it will ever continue to be.

HYDRATE OF CHLORAL.*

BY CARLOS F. MACDONALD, M. D.,

Superintendent of the State Lunatic Asylum for Insane Criminals,
at Auburn, N. Y.

Passing over the history of the discovery of hydrate of chloral by Liebreich and its subsequent introduction to the profession as a remedy of great value in certain forms of disease, I shall endeavor to state briefly what thus far seems to have been established regarding its physiological action, and conclude with a short account of its most important uses as a therapeutical agent.

A series of experiments, to determine the action of chloral in health and disease, was commenced at the New York State Lunatic Asylum, at Utica, soon after the remedy was brought to the notice of the profession and before it had gained much prominence in this country. These experiments were conducted by Dr. J. B. Andrews and the results reported in the *AMERICAN JOURNAL OF INSANITY* for July, 1871.

The following is a condensed summary of Dr. Andrews' conclusions, and I may state, in this connection, that these conclusions have been fully sustained by other experimenters both at home and abroad:

1. That, primarily, chloral tends to increase the force of the hearts' action as shown by an increase of arterial tension and a decrease in the number of pulsations.

2. That large doses prolong this effect, but the reduction in the number of pulsations is not proportionate to the size of the dose.

* Report on "Chloral," made to the Association of Superintendents of Asylums for the Insane, at the meeting at St. Louis, May, 1877.

3. That the secondary effect of chloral is to diminish both the force of the cardiac impulse and the arterial tension.

4. That the active effects of the drug are most marked in from twenty minutes to one hour after administration.

5. That these active effects are manifested by mental, motor and sensory disturbances, somewhat similar to those produced by chloroform, except that they approach less rapidly and continue longer. There is a sense of weight in the head, a numbness or prickling of the extremities with gradually increasing drowsiness. The patient becomes loquacious, his speech "thick" and soon he is unable to articulate distinctly. There is a sensation of warmth in the gastric region, and if the patient remains up and about after taking a large dose his gait becomes unsteady from general weakness, and his appearance is that of partial intoxication. If the patient assumes a recumbent posture after taking the dose he soon succumbs to its influence and passes rapidly into the profound sleep of chloral, from which, however, he can easily be aroused.

Liebreich and others assert that chloral, when it reaches the circulation, is decomposed and converted, by the alkalinity of the blood into chloroform, and that in this manner it acts through the medium of the vasomotor nerves. Chemists have generally accepted this theory, but the experiments of Gubler, Vulpian, Oré and Carville would seem to show that chloral, when administered in sufficient quantity, diminishes the general sensibility and reflex action of the nervous system, and that its effects are due to it *as chloral*, and not as chloroform. Admitting that sea-sickness depends upon irritation of the medulla oblongata, the marked action of chloral in controlling this affection would tend to

prove the truth of the theory that its action is not through the medium of the vaso-motor system, but that it acts directly upon the cord itself. It matters little, practically, whether its action takes place as chloral directly upon the spinal cord, or as chloroform through the vaso-motor system; the point of importance to the physician is, the great advantage of chloral over chloroform, in its comparative slowness of action, *its safety and ready control*.

Bouchut supposes that chloral is eliminated from the blood by the kidneys, and this, he thinks, explains the frequently marked modification of the urine, as shown by its density a few hours after the administration of the drug.

The temperature, generally, is slightly lowered, which is probably due in part to an arrest of cell metamorphosis from sedative influence, and partly to a diversion of blood from the surface toward the center of the body through capillary contraction.

Some observers have claimed that chloral produces cerebral congestion, but the experiments of Dr. Andrews do not confirm this. In the article referred to Dr. Andrews says, "If congestion occurred, the waking from chloral sleep would not be without marked after-effects, and especially there would not be such rapid recovery of tone as is observed in cases where large doses have been administered."

That chloral exerts a powerful effect upon the cardiac ganglia, depresses, to a certain extent, the circulation and arterial tension and arrests the functional activity of the brain by diminishing its blood supply, may, I think, be fairly conceded.

As regards the therapeutical action of chloral, it will be sufficient for the purpose of this report to briefly indicate the range of its application in the treatment of

the insane, together with an allusion to a few of the more important general diseases in which it has proved beneficial.

As a hypnotic chloral hydrate is probably unequaled; hence its great value, when judiciously and discriminately used, in the early stages of insanity where insomnia almost invariably obtains. Where sleeplessness is the result not of pain but of cerebral vascularity or hyperæmia, chloral is the remedy *par excellence*, and may be given with safety, in doses of from twenty to forty grains and repeated in a half or an hour if necessary. It seldom fails to produce sleep—of a natural character—which usually lasts from four to eight hours. It rarely produces headache, seldom impairs the appetite or disturbs the stomach or bowels. Repetition does not diminish its power; the dose scarcely ever requires to be increased, but, on the contrary, may frequently be reduced and still produce the desired effect. Where there is restlessness and muscular activity during the day, chloral, in small doses—ten to twenty grains—is very efficacious.

With the occasional exception of nausea and vomiting, chloral, when properly administered, almost never gives rise to any ill effects or unpleasant symptoms of any kind, although from what has been said in regard to its physiological action, I need scarcely add that it should be used with caution where there is cardiac debility, the result of *organic* disease of the heart. Dr. DaCosta, in his Toner lectures, says: "Not only in cases of cardiac adynamy, but in other cases where an enlarged and powerful ventricle is faltering before a tight stenosis, chloral is contraindicated as it has been found, under these circumstances, to produce a paralyzing effect upon the heart of a most undesirable character."

The danger, in such cases, may be greatly diminished, if not entirely averted, by combining digitalis with the chloral.

Where insomnia depends upon painful impressions on the periphery, opium, in some form, may be combined with chloral with good effect. Reasoning physiologically, these two remedies would seem to be antagonistic in their action, and theoretically this is true. But in practice we are often obliged to depart from theoretical teachings and not infrequently prescribe remedies empirically—from a knowledge founded on clinical experience.

Sedatives, such as hyoscyamus and the bromides, may be, and often are, given in combination with chloral with most excellent results; the sedative serving as an adjuvant to promote and prolong the effect of the chloral.

In cases where stimulants are indicated—cases of delirious excitement or acute mania with rapid tissue changes—they, also, may be given with chloral. I know of at least one large hospital for the insane where it has been a common practice to use sherry wine with chloral in solution, partly to disguise the taste of the latter, and partly because it is thought to act more promptly when thus combined.

Owing to its pungency, chloral should always be largely diluted when given, as otherwise it produces a disagreeable, burning sensation in the fauces and stomach. Dr. Squibb, of Brooklyn, N. Y., recommends the use of ice-water, and would exclude syrup, as a vehicle for chloral. Experience has fully shown that Dr. Squibb's form of administration is the best one known to us.

Chloral possesses remarkable qualities as an antispasmodic, and its great value in the treatment of certain

convulsive and spasmodic affections corroborates, to some extent, the opinion that it acts directly upon the medulla oblongata. Its use, during the paroxysms, in spasmodic asthma; in puerperal and infantile convulsions, in tetanus, whooping-cough, chorea, sea-sickness and as an antidote in cases of poisoning by strychnia has been followed by most gratifying results.

Bouchut, in a memoir read before the French Academy of Sciences, reports three cases of cerebral rheumatism in each of which a cure was effected by the use of chloral in doses of from forty-five to ninety grains, once or twice, at short intervals, the object being to make a decided impression at once, and thus obtain an immediate abatement of the violent agitation and delirium usually present in this affection.

The *Hebdomadal Gazette*, June, 1875, reports four cases of confirmed and severe cerebral rheumatism which were successfully treated with chloral hydrate.

Dr. Lowenstamm, a German physician, reports a case of severe convulsions occurring in an infant sixteen days old. Two grains of chloral were given every hour; the convulsions soon diminished in frequency and intensity, and on the following day the child was entirely free from them. The same writer also reports numerous cases of a similar kind, in which he derived marked benefit from the use of chloral. Dr. Polaillon reported to the Medical Society of Paris that, encouraged by the benefit he had derived from chloral in puerperal convulsions, he had twice resorted to it in infantile convulsions. He gave it in the form of an enema (chloral, grs. iij. aquæ 3v.) Calm sleep and a cessation of the convulsions followed, and a similar enema, repeated twenty-four hours later, completed the cure. This observer concludes that chloral is an eminently useful remedy in convulsive diseases.

Dr. George N. Monette, of New Orleans, reported, in the *American Journal of Medical Sciences* for October, 1875, a case of traumatic tetanus which recovered under the use of chloral. Mr. J. H. Salter records in the *Practitioner* for December, 1876, a case of acute traumatic tetanus which recovered under repeated subcutaneous injections of chloral. The same number of the *Practitioner* contains a report of an obstinate case of chorea minor which, after having resisted other remedies, was treated with chloral, forty-five grains, twice daily, in the form of an enema; only slight improvement following, the dose was increased to sixty grains twice a day. Under this treatment a permanent cure was effected in fifteen days.

A series of experiments, reported to the British Medical Association by J. Hughes Bennett, shows that chloral possesses considerable value as an antidote in cases of poisoning by strychnia. Dr. Bennett found that a lethal dose of strychnia administered to a rabbit and followed immediately by a dose of chloral failed to produce death. The antagonizing effect of the chloral was lessened in proportion to the interval between the administration of the drugs. Several instances of the successful use of chloral in cases of strychnia poisoning have already been reported in the journals. Dr. Levinstine, a German physician, reports an interesting case where strychnia apparently prevented death from an overdose of chloral, the patient, a man, having taken by mistake six drachms of the latter. Further investigations in this direction are desirable.

Chloral has been used successfully to produce partial anæsthesia in tedious cases of natural labor, in cholera, as an ectrotic in variola and as a disinfectant dressing for foul ulcers. Professor Bouchut, of Paris, habitually uses chloral to produce surgical anæsthesia in children

for the purpose of opening abscesses, extracting teeth, etc. He refers to ten thousand cases where he has employed it, and in this immense number he has never met with a fatal accident. He regards it as the best remedy we have for chorea, and adds, that it is absolutely necessary where the movements are so violent as to excoriate the skin and cause death.

Surely the results which I have mentioned must tend to establish the value of chloral as a therapeutical agent, and also afford some ground upon which to base its claims to a prominent place in the list of remedies for certain nervous affections.

As regards the so-called "chloral habit" I can only say that I have used chloral very largely in my practice—commencing with its introduction to the notice of the profession in America—and I have yet to meet with a case. Inquiry among professional brethren in my vicinity has failed to discover any instances of it, and if any of the members of this Association have met with cases in their practice I would like to hear from them.

Death may result from the improper employment of any potent medicine, but this fact can not serve as an argument against the proper use.

CASE OF HELEN MILLER.—SELF-MUTILATION.—TRACHEOTOMY.

REPORTED BY WALTER CHANNING, M. D.

Late Assistant Physician New York State Asylum for Insane Criminals.

Mrs. Helen Miller was first admitted to the State Asylum for Insane Criminals at Auburn, N. Y., in October, 1872, and discharged from there in December 1874. No medical record was made of her case, but it is stated that she passed most of the time in bed, her disease being "indisposition." Various sores made their appearance on her body, supposed to be syphilitic though she denied ever having had syphilis. She was discharged as "cured" on the expiration of her sentence. During her two years residence at the Asylum she made no attempt to mutilate herself.

A few months only after her discharge, she was again arrested for grand larceny and sentenced to the State Prison at Sing Sing for five years. Being anxious to be transferred to the Asylum, she began to "cut up," as she expresses it, and finally was transferred and re-admitted in July 1875.

The following information concerning her previous history, we have obtained from a physician in New York, who, Mrs. Miller stated, was a friend of hers. In a letter kindly written in answer to our enquiries, he says: "I first saw Helen Miller seven years ago when she visited my office and proposed putting herself under my care. Shortly afterward she was arrested, tried and convicted of stealing from Dr. ——. She has been the patient of a dozen physicians of my acquaintance. She never stole anything from me, but would never sit

alone in my office for a single moment, preferring to remain in the street. I spoke to her about it and she said she was afraid that something might be stolen and I would probably ascribe it to her, knowing that she had served a term in Sing Sing. Her last trial was for stealing a stuffed canary and a microscope lens. I had my doubts of her guilt in this case, as she had been at my office just before and after the time of the robbery. She swore she had never been tried before, but the evidence of her former conviction was shown by the District Attorney and this caused her second conviction. I believe her to be a kleptomaniac, if one ever existed, and probably her rooms are filled with things taken from doctor's offices. I was treating her for dysmenorrhœa, and was also trying to break her of the opium habit. I never saw the slightest evidence of her having led a fast life. She always dressed plainly and was cleanly in her person and conversation. Had a habit of boasting of all the physicians who had attended her and was fond of claiming acquaintanceship without much ground. I never thought her perfectly sane."

Mrs. Miller was first seen by us in August 1875, a month after admittance to the Asylum. She was an intelligent German Jewess, rather below medium size, thirty years of age, hair and complexion light. She was then thin in flesh, pulse weak, hands red and cold, lips blueish, tongue pale and tremulous when extended. But few of her teeth remained, and her face had a pinched look. Her smile was very pleasant, but her expression at other times was suspicious and irritable.

She was in bed suffering from what seemed to be a severe attack of hæmatemesis. Various remedies were applied, but the hæmorrhage continued several days unabated. Her bodily condition continuing, however,

perfectly good, notwithstanding the blood lost, simulation was suspected: treatment was suspended and the bleeding ceased. The coffee ground appearance of ejected matter she had imitated by vomiting food into her chamber-vessel and covering it with blood, (pricked and sucked from her gums,) and urine. This attack was followed by others of hysterical dysmenorrhœa, and dysentery. Through September she was confined to her bed most of the time with these attacks. Toward the end of the month, she became much depressed, feeling that she had a long sentence to serve in prison, and that she had no friends and but little to hope for in the future. On the 25th of the month, in a paroxysm of despair, she broke twenty three panes of glass. With a small piece of the glass she cut her left wrist and inserting it into the wound endeavored to reach the arteries. Her right hand, which she had used to break the window-panes, was slightly cut in several places. The wound of the wrist was superficial, an inch in length and drawn together with two stitches. She seemed to suffer almost no pain when the stitches were put in. She was much agitated, trembling from head to foot, and crying, but however, said nothing. The next day she was very repentant for what she had done and said that she would never do it again, but in about three weeks she again became "discouraged," to use her own word, or depressed, irritable and suspicious, and being enraged because she was refused opium, cut her arms to avenge her wrongs. The wounds were immediately below the elbow, on the inner surface of the forearm where the flexors are thickest. One cut was six inches in length, the other four. The skin and superficial fascia were cut in a straight line and as cleanly as if done by a surgeon, but the muscular tissue below was hacked in every direction and nearly to the

bone. She was crying and endeavoring to conceal the cuts when seen, and would say nothing as to the situation or number of pieces of glass she was said to have thrust into the wounds. As before she was much agitated, but sat perfectly still and allowed the wounds to be probed. For greater convenience she was etherized, several pieces of glass were then found deep in the wounds, after removing which the cuts were brought together with stitches. The wounds suppurred freely and at intervals of a few days, pieces of glass and splinters of wood were found and removed. The wounds healed rapidly, she gained in flesh and strength, worked about the ward, was very tractable and promised never to injure herself again. In six weeks the wounds were healed and she again became "discouraged." As before she was very irritable and abused the other patients, saying they were trying to torment and tantalize her. The attendants she also felt were "down on her." Some trifle again aroused her anger, and with the same motives as before she cut both her arms exactly where she had cut them on the previous occasion. She was etherized and two pieces of glass and a splinter of wood removed from the right arm, after which the wounds were brought together with stitches. The right arm healed readily, but the wound in the left arm became indolent, the granulations were pale and flabby, and after a few days an erysipelatous inflammation showed itself, followed by constitutional symptoms. These culminated in an attack of œdema glottidis, of such severity that suffocation appeared imminent. The tissues of the neck were much infiltrated, the face became livid and the pulse was hardly perceptible at the wrist. As a last resort, all remedies proving futile, tracheotomy was performed, a German, gutta-percha tracheotomy tube being used.

The operation gave immediate relief, but the patient being very weak and the wound showing no activity, (being in a sloughy, erysipelatous condition,) her chances of recovery seemed small. She rallied however, her strength increased, the wound began to granulate healthily and in eleven days the tube was removed. Three weeks after the operation, the wound had entirely healed, and she breathed naturally through her throat. The arm had also nearly healed during this time. During recovery an unusual degree of tetanus was overcome by the use of eighty grains of chloral daily. The effects of the prostration occasioned by the operation did not entirely disappear for nearly two months. During this time she was very patient, thoughtful of others, anxious to do darning or other light work, very neat in her person, a constant attendant at church, always cheerful and hopeful, and very grateful for what had been done for her. Much of the time she read and also wrote long letters to some of her old doctors in New York, filled with eulogies of all that had been done for her. She talked perfectly coherently and improved decidedly in general health, gaining in flesh and acquiring a good appetite.

This period of apparent convalescence continued about two weeks longer, when she became depressed as before, and cut her arms in the same places. From this time (December, 1875,) to April, 1876, she cut her arms and inserted glass, splinters and other objects into the wounds at intervals of six weeks, there generally being a wound of some kind in one arm. In April she was in a quiet, reasonable condition, and expressed a strong desire to be transferred to the Prison at Sing Sing. She was told this would be done if she would not cut herself for six months. This time had almost expired when, as usual, for the merest trifle, she again

mutilated her arms in about the same places, and buried pieces of glass in the wounds. The next cutting occurred six months after this. The wound in one arm was seven inches in length and deep, in the other superficial, and not more than three inches long. In the deep wound there were as many as thirty pieces of glass, several long splinters, the longest nearly six inches in length, and five shoe-nails. Some of the pieces of glass were covered with cloth, and could not therefore be felt with a probe.

In June, 1877, she cut herself for the last time. The gash was superficial, only two inches in length, and made with a piece of tin. She said she had a piece of glass in her arm, and wished to extract it. The day after this the wound was probed, and she was told decidedly that there was no glass in the arm. Angry that her word should be doubted she, a few minutes afterward, scratched her forehead slightly with a piece of glass, and then broke her chamber vessel to pieces on the wall over her head.

The following is a list of articles which have been removed from her arms and saved: ninety-four pieces of glass, thirty-four splinters, two tacks, four shoe nails, one pin, one needle. Several pieces of glass and the pins and needles first removed were unfortunately mislaid and lost. Including these the whole number of objects removed amounted to one hundred and fifty. Once she cut herself with a piece of tin, and once with a sharp splinter, but on all other occasions with glass. The glass was generally taken from windows, but once from a hand-glass, and once from a bottle. The pieces were of various sizes and shapes. Some were pointed, three inches in length, and one-half inch wide at the broad end; others were square, oblong, etc. The pieces from the hand-glass and bottle varied from a quarter of an

inch to an inch in length and diameter, and were rough and jagged. The smallest pieces were the size of small cherry stones. The longest splinter was nearly six inches long, the shortest less than one-fourth of an inch. The shoe nails, tacks, pins and needles were of ordinary size.

The screen in Mrs. Miller's room, over the windows, was kept locked; she was not allowed to use any article made of glass, was constantly watched, and if at all excited searched and secluded, and on a few occasions her hands were restrained; but, notwithstanding these precautions, she would procure the glass. On one occasion she wrapped a very small, sharp piece in a rag, and held it in her mouth; on another it was concealed in the vagina, and several times it was given her by other patients. Some pieces of glass she removed, and others she smeared with blood and *said* she had removed. If pieces by any accident came out, as they occasionally did, she saved them for the medical officers with scrupulous care. She would talk of her wounds as if she herself was the nurse, and the case was an interesting one for the doctors. When the inflammation was intense she would allow the wounds to be enlarged, and probed incessantly for an hour if necessary. Often in extracting a small splinter or a piece of glass wrapped in a rag, deep in the wound, it was difficult to obtain a grasp sufficiently strong to draw it out, and the forceps would slip off or a bit of ragged muscle would become entangled in them. The pain these things caused her was so little, however, that she would hold her arms generally perfectly still, and always absolutely refuse to take ether. Strange as it seems she apparently experienced actual erotic pleasure from the probings she was subjected to. She stated that she felt no pain when she inflicted the wounds.

During the past two years patient has had a distinct history of syphilis, shown by the characteristic eruption and pains in the bones that frequently confined her to the bed. She has been very hysterical, having frequent attacks of choking, globus hystericus, and imagined at one time that she had a spool in her throat, and could only swallow through the hole in the middle. For several days she refused food, but no attention was paid to her, and she recovered, being fed surreptitiously as usual. Her thieving propensities have often shown themselves. She would pick up any little thing she saw (particularly, when off the ward,) whether of any service to her or not, and always stoutly asserted, when discovered, that the articles were hers.

Her happiest periods were when the wounds were healing, and she was an object of surgical interest. She took a special pride in having the attention of the physicians directed toward her. At these times she worked about the ward, and even insisted on doing scrubbing and other heavy work, experiencing no inconvenience from the wounds. But even at these times, when tranquil and rational in conversation, and showing both unusual intelligence and cheerfulness, her tongue was very tremulous, her pulse rapid, and her whole system in a condition of such tension that the merest trifle would throw her off her balance. She was evidently struggling with all her might to control her actions with the slight amount of will remaining. These remissions would last only a short time, to be succeeded by doubts, suspicion, jealousy of all about her, and final despondency, in which state she was constantly angry with the other patients, thinking that they were maligning and persecuting her, and in utter hopelessness and despair as to herself. She would feel

that she must get relief in some way, and the *idea* of death seemed welcome, but she would hesitate and doubt, and fear to go any further. Finally, however, an innocent remark made to her by another patient would be construed into an insult of the blackest kind, or a simple refusal to give her extra diet or medicine, would be looked upon as a reflection on her honesty, and wishing to end her misery she would endeavor to kill herself and punish her enemies, and thus avenge her wrongs. That she should endeavor to commit suicide, and to make others suffer, by cutting the muscular tissue of her own arms, is only an example of the wonderful mystery of insanity.

When she felt a paroxysm approaching she would beg to be secluded. Then yielding to her feelings she would pour forth a volley of curses and abuse toward the other patients. Day and night she would continue this, taking no food, and sleeping none. Sometimes she would tear her clothes off. When a paroxysm was at its height she would stop and reason, but generally end by declaring that the doctors were very good and kind to her, but she would not be good, and wanted to be let alone. She never, on any occasion, abused the physician, and never attempted to injure any one. The outbursts lasted from one to several days, and terminated either by self-mutilation or utter exhaustion. Her former intervals of quiet and coherence are becoming less and less frequent. For the last year her delusions of persecution concerning the other patients have been very persistent, influencing her daily conduct, keeping her excited and noisy, and overcoming the little power left over her actions. Already indications of dementia are beginning to show themselves.

In looking over a large number of asylum reports, old files (not entirely complete,) of the AMERICAN JOUR-

NAL OF INSANITY, the *Journal of Mental Science*, and the *English Psychological Journal*, and the writings of Pinel, Arnold, Haslam, Burrows, Prichard, Connelly, De Boismont, Rush, Poole, Bucknill and Tuke, Forbes Winslow, Griesinger, Blanford, Maudsley and others, we find but few cases of self-mutilation similar to the one reported above. Burning, scalding, decapillation, emasculation are found to be the favorite methods. One patient bit his finger off; another cut a hole in his abdomen, drew out the intestines and cut a small portion off. Haslam reports the case of a female who mutilated herself by grinding glass to pieces between her teeth, and so it would be possible to go on and mention many other methods of torture.

One of the most interesting recent cases was that reported by Dr. J. B. Andrews, of the Utica Asylum, in the JOURNAL OF INSANITY for July, 1872, in which he removed three hundred needles from the body of an insane female patient. The needles had all been inserted before she became a patient in the Asylum. The patient was hysterical and in some ways resembled Mrs. Miller in disposition.

In the *Journal of Mental Science* for July 1875, Dr. Robie of the Dundee Asylum, reported the case of a woman who swallowed a circular tea-caddy one and one-fourth inches in diameter with suicidal intent.

Though in some of the reported cases the patients had concealed knives and other weapons with which to inflict injuries, most of the attempts were sudden and unpremeditated. In the present case the hysterical element was always present. The wounds were made as lacerated as possible, the garments were covered unnecessarily with blood and a time of day chosen when help was sure to be at hand. Everything was done to produce as much effect as possible. Though

the muscles were sometimes hacked to the bone, an artery sufficiently large to require ligation was never injured.

Griesinger gives cases in which insane persons simulate attempts at suicide. No doubt Mrs. Miller sometimes attempted simulation, especially on the day after the last cutting, when angry that her word had been doubted, she made a scratch on her forehead, thereby drawing blood which trickled down her face and then with a loud crash broke a chamber-vessel over her head. Her idea was to convey the impression that she wished to dash her brains out.

ON THE SO-CALLED MOTOR CENTERS IN THE HEMISPHERES OF THE CEREBRUM.

BY PROFESSOR MAURICE SCHIFF, OF FLORENCE.

Translated from the Italian by THEODORE DEECKE.

I.

ON NERVE CENTERS.

If we, with the majority of physiologists, call those parts in which a sensible excitation, sensitive or centripetal, is transformed into a motor impulse, nerve centers, all movements can have diverse centers, according to the nature of the centripetal excitation by which they can be produced. Thus we know that the motor nerves of the diaphragm have a primary center in the spinal medulla, since after the destruction of the medulla oblongata certain sensible excitations still produce, in a reflex way, a contraction of the diaphragm and a dilatation of the thoracic cavity. These motor nerves extend into the medulla oblongata, in which the excitation from the venosity of the blood produces the complicated movement of inspiration, in which the contraction of the diaphragm participates. In this way the second center, for the movements of the diaphragm, becomes the first center for certain associate movements into which the contraction of the diaphragm enters. The medulla oblongata contains, as it seems, not only one, but several centers, traversed by the continuations of the motor nerves of the diaphragm, centers which place these motor nerves in relation to those groups of motor nerves which produce evacuation, vomiting, singultus, etc.

So also by volition—that is, by a function of certain central fibers of the cerebrum, the movements of the diaphragm can be affected, and we can voluntarily contract it, separate from the action of the inspiratory muscles, and even in opposition to these, that is with the glottis closed. Thus we can but admit that the motor fibers of the diaphragm traverse the medulla oblongata, and meet in the cerebrum a third center, or a third group of centers in which they are brought into connection with the central parts of

sensitive nerves. Or, we can suppose, with the majority of the physiologists, that the motor fibers of the diaphragm terminate in the medulla oblongata in a central point, and that the fibers of the cerebrum send continuations towards this terminal point, through which they can produce the movement. These continuations should be regarded as centripetal, and not motors. I do not believe that for the present we are able to decide the question between these two possibilities. But if the analogy of other nerves, which are excited by voluntary movements, is of any value, I do not see why we should deny the existence of a cerebral center of the phrenic nerve, since the arguments in favor of the cerebral centers of other motor nerves are not of a more convincing nature. Though the movements of the diaphragm can be produced by excitations of certain points of the cerebrum, these excitations during normal respiration manifest themselves only, by an augmentation of the number and by the precipitate character of the inspirations.

Admitting now, but not yet conceding, that the motor tracts of the diaphragm continue into the cerebrum, what would be the true center of its movements? The answer in this case is not quite easy, as it depends entirely upon what we understand by a true center. It seems to me; if we admit that the center in dispute, stands in a special and particular relation to the production and excitation of movements, we must meet the question; whether the motor center must have a certain predominance over other parts of the nerve tracts, which transmit movements; or whether there exists simply a certain condition which can not be found in other parts of the transmitting tracts. The three groups of motor centers of the diaphragm, the spinal, the bulbar and the cerebral, differ from each other through the excitations by which they become active, and by the associations of the contractions of the diaphragm. But the same movements are produced by diverse reflex action in all the three centers specified.

The motor tract is excitable by reflex action at every point, and in this excitability there is no characteristic difference; the one point is simply a continuation of the other, and the inferior points maintain for an indefinite time their excitability, even after the destruction of a superior point; each of these points in question acts solely on the condition that the local reflex action has produced. From the beginning to the end of this tract there can not be found one point which stands in such a special or particular relation to the movement, that we could locate in it the real center of the movement. Here, either every point is a center or none. We

can search for special centers of the diverse associations in which the movements enter, but this would not be a motor center in the usual sense, because it does not in anything limit the movement itself; no one center has a special superiority over it, which is wanting in the other points. We might conveniently call the true center that cerebral part of the tract, with which it ends, but it will be seen that, in doing so, we are led by an anatomical consideration, and not by a physiological, since, physiologically, we demand that the true center, which we seek, should have some special influence upon the movement or upon the motor nerve; but the cerebral tract differs from the other points solely by the reflex actions, and not by its modes of producing or sustaining the movement itself.

A true physiological center for the movements of the diaphragm in a determined and limited point of the central nervous system has not been indicated by facts; and moreover its existence is not necessary for the synthesis of the facts known; we have, scientifically, no need of it. We can search point after point for the different centers for grouping together and associating different movements; but these would not be motor centers in the usual sense, since they do not limit the movements of a single muscle and because these centers could just as well be constituted from the arrangements of the central elements of sensation. From this it would be seen that, contemporaneously irritated in a given point, they would reflect over different motor elements, or rather motor districts, which would be found in various points far distant from the center.

A brief reflection will suffice to show, that a true motor center, in the sense indicated, for the other muscles, as far as the diaphragm is concerned, is not necessary, the apparent difference between this or that, exists only in the nature and in the seat of the excitation, and not in a difference of the nature of certain privileged points in the central motor tract. But the idea of the physiological necessity of special motor centers for the voluntary muscles, which we see repeatedly expressed every year, is entirely wrong; on the contrary, these special centers are superfluous and useless, yet we must submit to facts and admit their existence, as proved by experiments and facts. We will first consider, in a general way, the nature of the facts and the experiments which are claimed to prove the existence of special motor centers. How does the existence of a special motor center manifest itself in general? This depends entirely upon the sense in which the expression "center" is used.

The existence of a cilio-spinal, and a genito-spinal center in the spinal medulla was formerly admitted. These so-called centers have been adduced from very exact observations, but there is nothing in their nature which would logically justify the name of centers for the same.

Budge has found that by irritating the spinal medulla, excluding as much as possible, an interference of reflex action, a dilatation of the pupil can only be obtained from a limited tract, located in the inferior cervical and the superior dorsal part, and from this tract, nerves which dilate the pupil arise. This observation does not prove more than that this tract of the medulla, when it becomes irritated, has in regard to the pupil the same property as the peripheral nerves which arise there. This too would have led to recognizing a center by the following considerations.

1. That in the spinal medulla the centers can or must be excitable similar to the peripheral nerves. And to limit the center to this tract we will have to prove moreover,

2. That in this tract all the reflex actions can take place which produce a dilatation of the pupil.

3. That outside of the limits of this tract there can no reflex actions be produced which dilate the pupil.

On the other hand we can prove,

1. That the peripheral nerves after they have traversed in various directions a certain tract of the white substance enter into the true central part of the medulla, in which they produce reflex actions, losing their peripheral excitability and where they are no more irritated by mechanical or galvanic agencies.

2. That the transverse division of the medulla above the limits of the so-called cilio-spinal center, renders impossible certain reflex actions which took place in the pupil by sensitive nerves of the inferior part of the body, the spinal origin of which is still in continuity with the supposed center.

3. That every transverse section through one-half of the medulla above the supposed center, has still the same paralyzing influence upon the pupil as the division of the nerves which arise from the center.

It will be seen then as I made evident many years ago, that the true center of reflex action for the dilatation of the pupil is located, not in the part, but undoubtedly above the part from which an irritation produces a dilatation, and that the observations of Budge must be explained in this manner, that the pupular nerves proceed from a superior reflex center, in the supposed cilio-spinal

center, of the nature and of the property of the peripheral nerves and which has here lost its central nature.

The error of Budge arises from the circumstance that he endeavored to prove the existence of a center exclusively by means of irritation. This is at least in the medulla, an impossibility. The above remark may also be applied to the genito-spinal center of the same author. Hitherto we have no knowledge of a single specially limited center in the medulla spinalis of the higher vertebrates; but the frogs have in the medulla a special central region for the movement of the lymphatic vesicles. When we now leave these pseudo-centers and examine the other special centers, which have been claimed to exist in the central nervous system, we find, in the first place, a species which might be called anatomical centers. We know two of these, the vaso-motor center and the gustatory center, both located in the medulla oblongata.

Following, by means of dividing the medulla, the tracts of its vaso-motor nerves, we have found that they all continue finally into the medulla oblongata, in which the vaso-motor nerves of the skin and of the extremities terminate, in so far as this can be recognized by effects of paralysis. The vaso-motor nerves of the intestines pass for a great part through the medulla oblongata, and continue on through tracts in the pedunculi cerebri. We have also recognized that many vaso-motors of the head are located in the trigeminus and in the nerves of the tongue, which, arising in the cerebrum and passing through its substance terminate, in the medulla oblongata. The vaso-motor nerves which accompany the vagus, likewise enter the medulla oblongata, so that finally, in a small space there will be found meeting together, all the vaso-motor nerves of the body. The reflexions which operate at the same time on all the vaso-motor nerves, must act on this central point, and thus it will be found that, dividing the medulla oblongata, the vaso-motor nerves which traverse the spinal medulla in its entire length, will have lost an essential part of their excitability, that they will be partially paralyzed, although many other causes of reflex action, as I have shown long ago, may still act upon them by means of the medulla spinalis. In this sense I have declared that in the medulla oblongata there will be found a central point for the vaso-motor nerves, that is for all the vaso-motor nerves.

It will be seen that, taken in this sense, the central point is essentially anatomical; and I am not responsible for any exaggerations, which some years later, two authors committed, who con-

firmed my results, not by the way of transverse sections, but by the much less acceptable method of galvanic irritation, and who believed they saw in the medulla oblongata the unique physiological center of the vaso-motors, and who have claimed that outside of this part of the centers, no reflex action could have an effect upon the vessels, and that the latter, when separated from the medulla oblongata, would be entirely paralyzed. It is singular that recently I have been accused of contradicting my own doctrine, because I have, though declaring the medulla oblongata the center of the vaso-motors, at the same time and later published experiments proving that the medulla spinalis suffices to render possible a reflex action of these nerves. But it is evident that my way of observing, which I have sustained for over twenty years, does not imply that all the vaso-motor nerves originate in the medulla oblongata, neither that all the vaso-motors terminate in that part of the medulla. On the contrary I believe that I have found and communicated facts which prove the reverse of these assertions, and a part of these facts have been confirmed during the latter years by Goltz.

Bernard speaks of a center, the irritation of which produces diabetes. I believe I have proved that the district of the nervous centers, from which glycosuria can be produced, is more extended than Bernard has admitted, who gives to this point an extension only of a few 1-10 of an inch, and that the points from which we can produce a more copious secretion of sugar, are identical with the central points of the vaso-motor nerves, and that this property of the same is not due to a special influence, but exclusively to the action upon the vessels.

Another anatomical center is the gustatory center. The nerves of taste enter the central nervous system by two distinct trunks, through the nervus trigeminus and the nervus glosso-pharyngeus. It does not seem that the fibers of the latter pass the boundary of the medulla oblongata; the fibers of the trigeminus, which enter into the pons Varolii, do not reach farther than the bulb. If we make at the level of the superior roots of the glosso-pharyngeus with a small bent knife, a small oblique incision in a nearly transverse direction of the size of about two to three mm., through the lateral columns of the medulla oblongata, so that the incision divides these columns a little beyond the median line, there follows, at the first moment, a copious secretion of saliva, and when this diminishes, or has ceased, it will be remarked that the taste is lost on the corresponding half of the tongue, as well at the base as towards its

point down to the median line; a tasting substance applied to this half of the tongue will not produce any salivation. There are, besides, complicated lesions of sensibility in other parts of the trigeminus and partial motor paralysis in the corresponding half of the face and, if the lesion is much extended, an alteration of the voice. These experiments have been made on cats.

Before proceeding to other centers we have yet to return to the vaso-motor centers, in order to add some words regarding the relation of these centers to the animal heat. It is known that the existence of centers which produce, and centers which diminish the production of animal heat has recently been claimed. These centers do not exist, but we will reproduce the experimental facts on which the hypothesis of their existence is founded. The original experiments were made on rabbits, which are better adapted to demonstrate the phenomena in question than dogs, though the same can be reproduced in dogs. The lesions with which we have to treat are followed by a more or less extended and lasting dilatation of the vessels. We have already said that all the vaso-motor nerves do not terminate in the medulla oblongata, but that many of the vascular nerves of the intestines and of the liver traverse the pedunculi cerebri. If we make a small transverse incision, precisely limited to the origin of the pedunculus cerebri from the bulbus, without producing a noteworthy hæmorrhage, the abdominal vessels become fuller. Even if we limit as much as possible the loss of blood, there will be an increase of heat in the abdominal cavity, and as there is nothing in the rest of the circulation or in the respiration to reduce the heat considerably, there is, therefore, an increase in the temperature of the blood. Tsciecüssein (Du Bois Raymond Arch. 1856,) who has observed in some experiments a rise of temperature in the rectum, concludes that there exists in some part of the cerebrum, a center, the presence of which moderates the production of animal heat. Unfortunately, he did not know, or did not take into consideration the experiments on the central course of the vaso-motors of the intestines, of which I gave an account in the years 1845 and 1859, and which would not only have explained, but also predicted the phenomena observed by him. At a later period these experiments were repeated, partly with the same effect as observed by Tsciecüssein, partly with a contrary effect, which can well be imagined when we consider that the lesions, if too extensive, may lead to paralysis so extended as to produce a stasis in the circulation and respiration, which in turn creates an excessive loss of heat, that will

more than suffice to obscure the phenomena above mentioned. Haidenhain, who in several cases has confirmed the experiments of Tscieciŭscin, remarks that we have not to deal here with an economization of heat, since the thermometer placed below the skin shows after the operation a maximum superior to the normal. We can not put so much weight on this observation. The maximum height proves solely that the blood has become hotter; but the loss of heat from the skin corresponds essentially with the time the thermometer has been employed, and not with its absolute maximum. In this regard the thermo-electric apparatus would be more decisive than the ordinary thermometer. If, then (admitted, but not conceded,) it should be proved that the loss through the skin is a little augmented, this inconsiderable increase must be relatively less than that which the blood gains in heat from the dilatation of the abdominal vessels. Nobody has ever pretended that in these experiments the matter depended exclusively upon an economization of heat by the small rise of temperature in the skin. The blood which is more largely in contact with the intestines must become hotter.

When we make the incision lower down in the medulla oblongata, or in the medulla spinalis, other dilatations, besides the paralysis of the abdominal vessels, will occur, by which the distribution of the blood becomes modified; stagnation will be produced in the skin, or disturbances in respiration and alterations in the arterial pressure which create conditions of coolness. Accordingly, either these latter prevail, or the conditions of an increase of heat, and we have mixed results of an increase and of a diminution of heat. I believe I have been the first who, by partly neutralizing the loss of heat, has preserved alive the animals operated upon. The results obtained in this manner, though not yet sufficiently analyzed, show, however, that we have neither a reason nor a right to claim the superior part of the medulla spinalis or the bulbus, as special heat producing centers or as centers for the moderation of heat. There might, however, exist in the organism, without our being able to demonstrate its existence, at least for the present, a center which moderates the heat, not in the sense of Tscieciŭscin, a center which impedes an excessive production of heat, but a central point on which the sensation of excessive heat acts, whether it be produced by or introduced into the body; a point in which the nervous elements would share, which excite the whole mechanism for the absorption of heat or for its decrease. This would be a hypothetical center of co-ordination, the existence

of which it would be difficult to prove with the means at present in use in our Italian laboratories.

The centers of co-ordination are those tracts of the central nervous system in which a reflex action operates on a sum or a complexity of moving forces, in order to make them co-operate systematically for the production of a compound effect which corresponds to the wants of the organism. We have in these centers, if it is allowable to use this expression, a knot which unites in itself different threads which can be pulled contemporaneously or in regular succession. These centers are the most important in the animal economy, and many must exist in the cerebrum. It is probable that every complex movement, which is the regular consequence of certain sensations, has its co-ordinating center, so, also, the different expressions which accompany the passions. There seems to exist a center for vomiting and for deglutition. That we know of a few only of these centers is on account of the difficulties which are inevitably connected with the methods of recognizing and determining them. The indispensable condition for the purpose of recognizing such a center is, that we are able to isolate it and destroy it. The effect of the local irritation does not prove in any way the existence of such a center, and this for two reasons:

1. The effect of an irritation may depend as well upon the irritation of centripetal conductors as upon the irritation of a center claimed to be excited. Thus, for instance, the direct irritation of the medulla oblongata intended to exhibit an effect on respiration, does not exhibit another effect by an analogous irritation of the sensitive nerves which here enter, especially the pneumogastric.

2. We know that the true central parts of the motor and of the sensitive nerves are distinguished from their roots by the circumstance (at least in the medulla spinalis,) that they are not excitable by our artificial means of irritation. The galvanic or mechanical irritation of these central nerves produces neither a movement nor a sensation. Therefore the true centers in the medulla and in the bulbus are not excitable, and this seems also to be the case in the cerebrum.

If, now, in the experiment mentioned from the irritation of the bulbus, there results an effect upon the respiration, it is most probable that this effect is due solely to the roots of the sensitive nerves which enter into the medulla, and not to the center. From the effect of the irritation we can never decide whether the bulbus is the co-ordinating center of respiration, or whether it only

contains the excitators, without producing in them any central or reflex action. We know in what manner the existence of the co-ordinating centers of respiration has been discovered and demonstrated by Legallois and Flourens, and how, later on, we have been able to prove that this center is double, one for each half of the body. The confirmation of this was the last scientific work in which Flourens was engaged. More recently Rokitsky (junr) has observed that in animals in which he had augmented the reflex action by moderate doses of strychnine, after division of the medulla oblongata, there can be produced movements and a series of inspiratory contractions of the diaphragm, and I have seen the same phenomenon without employing the strychnine, so that after considerable artificial respiration there may be an accumulation of carbonic acid in the blood. These facts furnish another proof that the medulla oblongata is not the only place from which an inspiratory impulse is induced, but that it contains the co-ordinating tracts for diverse respiratory movements.

There is another co-ordinating center in the pedunculus cerebri, which in different animals seems to set in action the muscular groups which serve to change the direction of the progressive movement by producing a deviation in a lateral direction. This can very well be recognized in rabbits and in other mammalia, which are generally used for these experiments. When in these the pedunculus cerebri on the left side has been divided to its full height, we observe in all cerebral movements which are produced by sensual impressions, and not by reflex actions which originate directly from the sensitive nerves of the trunk, that those muscles predominate which serve the purpose of directing the body towards one side, viz, to the right. When the division has been effected in another animal exactly at the same height, but on the other side, it deviates in its movements entirely to the left. A division of the pedunculi on both sides always produces paralysis of the two muscular groups, and an uncertain oscillatory movement of the voluntary muscles, in consequence of which the animal often falls, swaying from one side to the other, because the lateral equilibrium can not be longer sustained by the influence of the cerebrum. A description of the phenomena has been given long ago. We have demonstrated how the cerebral paralysis of these groups of muscles must produce, during voluntary movements, that complexity of phenomena which Magendie has described under the name "*Mouvement de Manège*," and which had been observed already by Arneman in the last century.

It seems important that immediately in continuation with the irradiation of nerve fibers toward the hemispheres, there has been found a center for the direction of the general movements of the body, from one side to the other. But the muscles which are placed under the influence of this center may vary with the orders of the animals, according to the different mechanism of locomotion. This results from the fact, known long ago, that in fishes the division of the pedunculus cerebri produces a rotatory movement. Which of the groups of muscles in the human being would become paralyzed by a destruction of this center can not yet be decided. Another co-ordinating center for the rotation of the body in its longitudinal axis, and especially for the vertebral column, exists in the median peduncle of the cerebellum and extends decussating, not only into the substance of the latter, but also into the transverse fibers of the pons Varolii. A fourth co-ordinating center we know for the harmonic movement of the eye-balls around their antero-posterior axis, when the head is inclined towards the shoulder and when the longitudinal axis of the whole body moves in a lateral direction. This movement can be very well observed in human beings. Experiments made on cats have proved that the co-ordinating center of these movements is located in the posterior corpora quadrigemina.

Centers of arrest, as special centers, were first distinguished by Secienoff and after him by many authors. Such centers by their presence or by their activity, would impede or diminish the reflex action in another part of the central nervous system. As to the facts we do not need to discuss them. They are generally admitted, as it has been known for a long time, that the reflex action in one part of the center becomes more energetic, when we suppress another part of the center, and that an irritation which sets in action one part, diminishes the intensity of the reflex action in the rest of the central nervous system. But the idea expressed by Secienoff in 1863, that centers did exist, the sole function of which was the suppression of the vivacity of the reflex phenomena has not been generally admitted. It seems to me that the explanation which I gave in 1858, in my work on physiology of the nervous and muscular system, is more in conformity with the facts known than the hypothesis of the existence of special centers of arrest. On the other hand Herzen, in 1865, after the publication of the first work of Secienoff, has given a critical and experimental review relating to the facts in question, and I can not do better than to remind the reader of the work of

Herzen, since all the facts which were afterwards furnished by the defenders of the centers of arrest, have not decided the question in favor of their opinion. Although we can not admit the existence of special centers for the arrest of reflex movements, viz.: centers which arrest the action of another part of the nervous centers, we can no longer deny the existence of centers of arrest for certain peripheric movements. Since by a new series of experiments on the arresting nerves, it has been demonstrated that such nerves really exist and that we have reason to regard certain fibers of the pneumo-gastric, as arrestors of the movement of the heart, we must admit, that that part of the medulla in which the cardiac branch of the vagus is excitable in a reflex way, is a center of arrest for the heart. If it is true, as many believe, that the systole of the heart is a reflex action produced by ganglia in the heart, and that the fibres of the vagus exert their action on this reflex mechanism, then the centers in the medulla oblongata, which arrest the heart, would be only centers of arrest for a reflex action. But we have proved long ago that the fibers of the vagus in the heart must act directly on the muscular fibers, and not by means of a reflex mechanism, and no one has ever attempted to show that our proof was in any way insufficient. We have, therefore, the right to distinguish the arresting peripheral centers, which really exist, from the supposed inter-central centers of arrest.

II.

ON THE SO-CALLED MOTOR CENTERS.

We have shown in the foregoing, that the idea of a motor center, as a privileged part, compared with the rest of the inter-cerebral and inter-spinal motor tracts, is not a necessity for the physiology of the cerebrum, and that it does not meet the wants of science. In order to prevent a misunderstanding, however, we must add that Hitzig has nowhere declared that he took his cerebral motor centers in that sense. It seems that Hitzig, if I understand him right, imagines that his centers in the grey cortex of the brain are to be considered as the points in which the psychical function, (the will,) acts upon matter and becomes a nervous transmission. Hitzig has not only in two different works spoken in this manner of his centers, but has also added the second time that he regards this in reality as one of the most useful results of his labors.

Abstractly from the spiritualistic flavor of such an explanation, we can not deny that there may exist in the centers determined points, in which the sensations are converted into motor actions. We can call these points centers. Thus far it seems to be a simple terminological question. But also in the medulla spinalis the motor excitations of the same muscles can be produced by sensitive excitations. These muscles, therefore, must have motor centers in the medulla. And these spinal motor centers, for each group of muscles must be very numerous, since at every point of the medulla a sensible irritation can become a motor impulse for the posterior extremities. This has been proved in a beautiful experiment by Van Deen, to confirm which we had an opportunity, after it had been renounced for a long time. An incision commencing at the posterior surface of the medulla and carried towards the anterior surface, sparing the anterior columns, at least for the greater part, will permit the transmission of reflex actions from a superior part of the medulla to parts inferior to the incision, but not in the opposite direction. At the same time the inferior parts of the medulla can also transmit reflex actions to the posterior extremities. When we change this experiment in different ways, which can easily be imagined, we arrive at the conclusion, that at every section, at least in every vertebral segment of the medulla spinalis, above the roots of the nerves of the posterior extremities, there are mechanisms which reflect upon the roots of the nerves of the extremities. And the reflex action can be transmitted from every point exclusively by the anterior columns, which conduct no other than motor impulses. Thus in every point of the medulla, every muscle of the posterior extremities must have its motor center. We can also say with great probability that these motor centers must be repeated at every height in the right and in the left half, in the anterior and in the posterior cornu of the medulla spinalis. Thus, before arriving at the medulla oblongata, a motor tract of one muscle must traverse and touch an innumerable quantity of motor centers; in the bulbus it must find another quantity, and still its cerebral motor center should be but one? This is not very probable, on the contrary, it seems to us that every conductor of movement from the point in which it enters in the first ganglionic corpuscles of the medulla spinalis up to its cerebral termination, represents a continuous series of such so-called motor centers, which exist in every point in which the conductor is in communication with the reflecting substance. This communication is effected by a dense net of the very finest

ramifications, as Gerlach has demonstrated, and which has been so well illustrated by Golgi.

A small point of this long chain of centers for each muscle, even if it is located in the cortical substance of the cerebrum, can but be of little consequence; and since the existence of a motor center is demonstrated only in this way, the claim of Hitzig can but lose something of its luster. In the foregoing, I, however, have done nothing more than translated an expression of a somewhat too spiritualistic nature into a language more familiar to physiology. All the rest is merely a strict consequence of this translation.

It is interesting, in more than one regard, to see whether such a cortical point is a point only in a chain of the motor centers, for one and the same group of muscles. In the first place it would be of importance to verify with Hitzig, that for each group of muscles not more than one limited point can be found on the surface of the cerebrum, which must be considered as a center. This would give an idea of the multiplicity of the apparatus located, side by side, in this cortex so uniform in appearance.

For the second place, it would be an interesting fact if the existence of such motor centers in the hemispheres of animals could be proved, although human and comparative pathology have stated with certainty that the motor centers do not extend above the base of the brain. This discordance is so great that the acknowledgement of this hypothesis would once more refute the theory of the unity of the fundamental plan of the cerebrum of animals and of men, and the application of physiological facts to pathology. This and other consequences would of course not come into consideration, if the existence of the centers had been proved. Let us see in what way this has been attempted. To decide whether a peripheral nerve is motor, we have to observe the effect of its division or of its irritation. Yet, the irritation may be effective and produce muscular contractions, after the nerve has been separated from all centers, while, still in communication with these, the irritation of a sensitive nerve may, in a reflex way, produce the same movements. The existence of a center in the medulla can not be proved by irritation, since we all know that the motor as well as the sensitive tracts, after they have entered the grey substance, lose their excitability by the electric current. But even if they were excitable from these points, we would not be able, from the contractions of the muscles which result, to decide whether the center of a motor or of a sensitive nerve had been ir-

ritated or the nerves themselves. The only method which ought to be adopted is that of isolating the center by division or of destroying it. This is more difficult in the medulla than some authors seem inclined to admit, and still more, evidently, in the cerebrum itself. If the destruction of a part of the central nervous system is followed by paralysis without sensitive disturbances or by sensitive disorders without paralysis, the interpretation would not offer any difficulties; yet who will decide the question in such cases whether a center has been destroyed or a tract? Yet, also, slight paralytic symptoms may emanate from disorders in the perception, which by itself must produce some irregularities in the movements, and who does not recollect how difficult it is to recognize the first traces of true paralysis in the course of locomotor ataxy?

In those cases in which the extirpation is not followed by a positive result, we must conclude that neither a tract nor a center of importance has been injured, at least not one of Hitzig's points in which the *soul* enters into action. The destruction or the extirpation of these cortical points has never produced a true paralysis; on the contrary, even the slightest paralytic symptoms are wanting, and the disturbances are solely of a sensitive character. It is by the effect of galvanic irritation that Hitzig claims to have demonstrated the existence of his cerebral motor centers!

The centers and the central fibers in the medulla spinalis, as well as its other parts, except the posterior columns and some fibers which continue towards the vaso-motor centers in the medulla oblongata, are not excitable by galvanic irritation. That the central fibers, which are not excitable in the medulla oblongata, should become so in the cerebrum may be possible but it is not probable. From the fact of their excitability we can not decide, whether they are central parts, or fibers which have still in the cerebrum preserved their peripheral nature and which act on their centers (perhaps very far off) in a reflex way. The fibers which ascend the medulla spinalis and oblongata without losing their excitability are those for the sensations of contact. They can still be found at the base of the brain, and very probably ascend into the hemispheres. They are the same fibers, of which, in my first experiments, I was not able to recognize a central termination, and it is my opinion, which I also expressed immediately after I had repeated the experiments of Hitzig and Fritsch, that it is the excitation of these fibers which produces in a reflex way the muscular phenomena, that have been taken as the result of the direct irrita-

tion of motor centers. I showed in 1873 by a series of experiments that they exhibit all the distinct characters of reflex movements; but the direct proof of their exclusively sensitive nature can only be furnished by the extirpation of these so-called motor centers.

III.

NOTES ON THE EFFECT OF LESIONS OF THE SO-CALLED MOTOR CENTERS.

In the appendix to my Lectures on the encephalon I have described the phenomena in detail which characterize a paralysis of the sensation of contact, and the secondary disturbances of movements which arise therefrom. Henle, not upon the ground of his own experiments, but referring to the description given by Hitzig, came to a similar conclusion. Nevertheless Hitzig in his last publication, 1876, accuses me of having a false idea of the nature of the disturbances. But he himself, some time ago, from the results consecutive upon the extirpation of his centers, changed his opinion regarding the exclusively motor nature of the phenomena, and called them "disturbances of the muscular consciousness." This expression has been accepted in medical literature, although the most different ideas seem to be connected with it, and nobody has yet given a definition of it or limited its functions. Of recent writers upon the subject, Albertoni has returned to the motor theory and endeavors to explain the phenomena from the prevalence of some movements over others, which are extinguished by the effect of the lesions. Yet the animals, thus operated upon, when in repose exhibit all the disturbances in question, but they run, when chased, through the tortuous roads of a garden with such a security and velocity that nobody would recognize them as having been in any way injured; but in a room, the floor of which has been made smooth, they frequently slip and fall and are easily distinguished from other animals which have not been operated upon. This fact undoubtedly proves a disturbance in the sphere of sensation, even though no pain is manifest. It must here be mentioned that recently Sachs has proved the existence of sensible nerves in the muscles of the frog, and we have found that the muscles of the extremities of mammalia possess a certain sensation of contact. We might call this muscular sensibility. But when Hitzig and his followers speak of muscular consciousness

they attribute to this a perception of the position of the muscles and an important influence upon maintaining the equilibrium of their movements. This can not be proved.

In my opinion it is entirely unavailing to ascribe to the organism a new quality, hitherto unknown, in order to explain facts which can be fully explained by modifications already admitted in science. There is not one phenomenon in these disturbances which could not result from the loss of the sensation of contact in the extremity on the side opposite to the extirpated so-called motor center in the cerebrum.

The experiments of Vierordt have shown how important in men the sensation of contact in the plantar surface is for the regularity and the equilibrium of the movements. I have repeated those experiments in dogs by cooling the feet up to the tibio-calcaneal articulation in order to render the sensibility obtuse, and I have obtained the same phenomena of disturbance which were observed after the extirpation of the corresponding so-called motor center in the cortex of the cerebrum. In these experiments the muscular activity was not diminished.

We must therefore conclude at least that a certain cutaneous anæsthesia suffices to produce phenomena similar to the disturbances of the muscular consciousness of Hitzig. It remains to demonstrate the real existence of this cutaneous anæsthesia consecutive upon the extirpation of the so-called cerebral centers. In this regard the following two observations must be considered as not equivocal: In a dog I had completely destroyed the so-called center for the right anterior extremity, and incompletely the one for the right posterior extremity. All the characteristic symptoms of the lesions were present, but, when running rapidly around the garden, no traces of an injury could be noticed. By chance I learned that the animal had an aversion to step into water, even when the latter covered the ground only to half a centimeter in height. When meeting water, poured on the pavement, it always went around it. When blindfolded it stepped into the water with the left paw, it suddenly drew it back, made some rapid movements, as if shaking the water off and took another way. When, however, entering the water with the right fore-paw, the animal was not sensible of it and did not retreat before the left one stepped into the wet spot. This experiment has been made repeatedly in summer, when the water taken from the fountain in the garden had a temperature from 70 to 75 degrees Fahr.

Another experiment has been many times repeated on three young dogs, which I had kept alive a long time after the extirpa-

tion of the so-called center for the left posterior extremity. These dogs frequently amused themselves in chasing bits of paper carried away by the wind. A feather was fastened to a cord and placed before them. They tried to catch it and played with it in the usual manner; when the feather was pulled back they looked for it, and when it was lowered down on their back or shoulder, or touched the right thigh, they felt it at once and made suitable movements to seize it with the mouth or the paw. This was not the case when the feather touched the thigh, or the tibia of the left side, the animals did not notice its presence at all, even when they were still searching for it, but, when it was raised to the back they immediately turned their head to the left side. Another proof of the existence of a certain cutaneous anæsthesia was manifested in the behavior of the animals operated on against parasites of the skin, which were without comparison more numerous on the parts of the body corresponding to the cerebral lesions. This reminds me of the enormous accumulation of *Goniocotes* and *Lipeurus* on the body of birds after the extirpation of the two hemispheres of the cerebrum.

From these facts it can not be questioned that the destruction of the so-called motor centers produces a certain cutaneous anæsthesia, and it is evident that this anæsthesia suffices to explain the concomitant muscular phenomena. To those, however, who still believe in the motor nature of those centers, the following experiment will be of interest, which, in 1872, I executed many times: In a young and healthy dog I destroyed the centers for the two extremities of the left side. After two or three weeks, when the characteristic phenomena were well marked, the animals were again etherized and I divided the right posterior columns of the medulla at the level of the last costal vertebra. After the healing of the wound the animals were again in perfect health. Nobody, who did not know it, could decide, after the most minute examination of the muscular phenomena in the extremities, on which side the cerebrum and on which the medulla spinalis has been injured. Only a short time after the operation on the side of the lesion in the medulla a hyperæsthesia to pressure was recognized. In another dog, after the destruction of the famous center on the right side of the cerebrum, the right posterior columns of the medulla were divided. After the hyperæsthesia had disappeared no modification in the phenomena could be noticed from the latter operation.

We know from pathological evidences in man the symptoms following a destruction of the posterior columns of the medulla;

experiments on dogs have given analogous results. Whether the famous cerebral centers in dogs are the same in human beings we do not know with certainty, but it is my opinion that lesions of those points, which correspond physiologically, would produce a species of locomotor ataxy; Hitzig and his followers would expect a *psychomotor* paralysis. It is true the locomotor ataxy to which I refer has not yet been found in cases in which an autopsy has been made, but every one who knows the history of this disease and who is aware of the relations between pathology and physiology will not be surprised by this fact. Traces, however, of a cerebral locomotor ataxy are not missing in clinical annals.

It has been said in the foregoing that the symptoms of a destruction of the cerebral centers of Hitzig can not be distinguished from those of a division of the posterior columns of the spinal medulla. This refers only to the symptoms observed during the physiological life. There exist differences when the animal is under the influence of small or moderate doses of strychnia or thebaina. If in such cases the posterior columns of the spinal medulla on one side (let it be the right side) are divided, the very slightest excitation of the sole of the left foot induces a tetanus. This is not so on the right side, it wants a considerable pressure to produce the same effect. If on the other hand in such a case the so-called cerebral center has been destroyed on one side there will be no difference in the two extremities, the tetanus will be as readily produced by an irritation of the one sole as of the other. If we operate on an animal which has on the right side a cerebral and on the left a spinal ataxy, the tetanus will be induced by an excitation of the left and not of the right sole. This is also the case when the tetanus has been produced by thebaina, of which, however, relatively larger doses are required. If the doses are too large the difference mentioned is only remarkable in the first period of the poisoning, it becomes gradually more slight and disappears before death. The difference explains itself when we consider that in both cases of poisoning the first reflex action, which produces the tetanus, originates neither in the cerebrum nor in the spinal medulla, but in the medulla oblongata, from which it propagates downward into the spinal medulla.

NEW ENGLAND PSYCHOLOGICAL SOCIETY.

The New England Psychological Society held its quarterly meeting in September last, at which the chairman, Dr. Earle, of the "committee to prepare and submit to the next meeting a method for the trustworthy reporting of recoveries," reported progress, which led to an informal discussion and a recommitment of the subject to the same committee.

The subject for discussion, "What is the best method of supervising institutions for the insane by authorities superior to the Superintendent," was brought up, and after an interesting exchange of views further consideration was postponed to the next meeting.

The annual meeting of the Society was held at Worcester as usual, upon the 11th of December, and officers for the ensuing year were chosen. Dr. J. P. Bancroft was elected President; Dr. H. M. Harlow, Vice President; Dr. B. D. Eastman, Secretary and Treasurer.

The retiring president, Dr. Tyler, addressed the Society upon the subject of the general paralysis of the insane, or paresis, citing particularly the experience he had had as a Superintendent of institutions for the insane, and as a practitioner. As a Superintendent the cases which came under his observation had all become sufficiently insane to require hospital custody, and all hope of recovery had past, but since leaving the McLean Asylum he had seen several cases which presented all the symptoms of the early stage of general paralysis, improve so decidedly under treatment that he had debated in his mind whether it was possible that in the early stages this disease was curable. One man, with well marked tripping of the tongue, etc., had come

voluntarily and alone to consult him, because, as he said, if he went to these other doctors they would call him crazy and send him to the Asylum. This man had improved and resumed business. The discussion elicited by these remarks was very interesting. Several members had seen very remarkable cases and very marked remissions in the disease, one notable one in which the mayor of a city had for a time resumed his official duty, but none had seen a case of real recovery. This subject was afterwards designated for discussion at the next meeting.

Dr. Earle, from the committee on the method of trustworthy reporting of recoveries, submitted the following preamble and resolutions, which were unanimously adopted:

" *Whereas*, the method generally heretofore pursued in reporting the recoveries of patients at the institutions for the insane has, by its avoidance of a definite statement of the repeated recoveries of the same person, in cases of periodical or recurrent insanity, been largely instrumental in imparting to the general reader, and particularly to persons outside of the profession who are specially interested in the subject, an erroneous opinion of the curability of persons afflicted with mental disorder, and

" *Whereas*, as a result of that erroneous opinion computations have been made in political and social economy, based upon an assumed proportion of curables among the insane which is evidently far too large; and

" *Whereas*, the attainment of truth, and not the dissemination of error, is the true object of all statistical science; therefore

" *Resolved*, That in the preparation of published reports this Society recommends the adoption of some method by which that erroneous opinion may be corrected, and in the future prevented.

" *Resolved*, That without prescribing or suggesting a definite formula, it is recommended that a clear exposition should be made of the facts in relation to the following points:

" 1st. In regard to patients admitted in the course of the year; the number admitted for the first time, and the number of readmissions, specifying the number who have been received twice, thrice, four, and any greater number of times; and also the num-

ber who had previously been discharged recovered, specifying likewise the number who had recovered once, twice, thrice, and any greater number of times.

"2d. In regard to patients discharged in the course of the year; the whole number of recoveries, specifying the number of those who recovered for the first time, as well as of those who recovered for the second, the third, the fourth, the fifth, and any time still higher in the scale of numbers.

"*Resolved*, Furthermore, that the true import and value of the statistics of any institution for the insane can be attained in no way other than by an analysis of the results, in which are shown not alone the number of persons who recovered once, but the number of those same persons who recovered twice, thrice, four, five, or any higher number of times; and that any collection of statistics which has not been subjected to such an analysis is of comparatively little value."

The subject for discussion, "What is the best method of supervising institutions for the insane, by authorities superior to the Superintendent," elicited an interesting exchange of views held by the members as well as of the laws and customs which obtain in different States; but no formal resolutions were passed, the subject being indefinitely postponed.

In the wide range given to the discussion some curiosities in legislation touching legal protection of the insane were noticed by Dr. Bancroft. In the State of New Hampshire there is one State Asylum for the insane, at which a large majority of the patients, something less than three hundred, are private or self-supporting. The law provides with admirable care for the protection of its patients, and rigidly guards against improper committals. Twelve trustees, appointed and commissioned by the governor and council, are required to watch over its interests, and some one of this board must visit and inspect the Asylum twice at least in each month without previous notice, and give every patient who wishes it the opportunity to make state-

ments to them privately. All letters written to the trustees by patients must be forwarded by the Superintendent without inspection. The Governor and Council, President of the Senate, and Speaker of the House are constituted *ex-officio* a Board of Visitors, and are required to examine into its condition and report to the Legislature. In addition to this the Senate and House each has its committee to examine into its affairs at each session of the Legislature. The law provides that no person shall be admitted as a patient without the certificate of insanity of two physicians after a personal examination within one week; and the respectability of the physicians and the genuineness of the signatures are to be certified by a public official. The law further requires that a competent physician shall be in immediate charge. So far as the State Asylum is concerned these wise and humane provisions are in constant force, but here the protective legislation ceases. There are in the State at least seven other asylums, mainly occupied by the insane poor, and accommodating probably a larger number of insane persons than the State Asylum. These are connected with the County Almshouses, but in some instances are open to others than paupers, and no law prevents their being so to any extent. The Legislature has, so far, overlooked this considerable insane population, and provided for them no protective legislation. No legal conditions for admission to these institutions are fixed; no legal obstacles are in the way of the committal of any person alleged to be insane, on an agreement with the overseer; and no resident physicians are required. There is no provision for their inspection by State authority, nor any authorized channels of information as to whether commitments and care are conformable to the humane principles recognized in the laws applying

to the State Asylum. This discrimination between the pauper insane and those of other classes, leaving the former without the special protections, which the loss of reason calls for, while providing them so watchfully for the latter, seems an eccentricity of legislation difficult to account for.

B. D. EASTMAN,
Secretary and Treasurer.

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NEW HAMPSHIRE. *Report of the New Hampshire Asylum for the Insane*: 1876. Dr. J. P. BANCROFT.

There were in the Asylum, at date of last report, 279 patients. Admitted since, 119. Total, 398. Discharged recovered, 36. Improved, 38. Unimproved, 27. Died, 17. Total, 118. Remaining under treatment, 280.

Dr. Bancroft's remarks upon the medical and moral treatment of the insane in institutions, show a comprehension of the subject and an appreciation of the means to be used and of the influences to be invoked to insure success. The ideal can be readily given in the form of statements of what is demanded, and the desire to attain perfection affords the best incentive to continued effort. This is fully realized, as also the imperfections existing in practice. To lessen, and, so far as practicable, to overcome these is the daily problem and labor of the conscientious officer. To approximate the perfect ideal of what an asylum should be, remains as the limit of human progress and effort in this direction. "Necessity then keeps us sufficiently below our ideal to afford a perpetual stimulus to struggle with the internal difficulties of the situation." During the year, through the kindness of his Board of Trustees, Dr. Bancroft enjoyed the advantage of a trip abroad. He has presented a general summary of what he there observed, in the building and conduct of asylums, in the way of comparison with what he was familiar with at home.

Improvements, both within and out of doors, have been made during the year. The most important are the remodeling and enlarging of the service rooms of some of the older wards, and arranging hospital rooms so that the friends of patients can assist in nursing when desirable, and the sick can be isolated from the general wards.

Several acres of farm lands have been reclaimed and made productive by drainage and by mixing sand with the clay surface.

Report of the Board of Auditors appointed by the Governor and Council to inquire into the general financial transactions of the New Hampshire Asylum for the Insane; made to the Legislature June, 1877.

This report covers two general topics, the financial transactions and the treatment of the insane; it was not instigated by any charges either general or specific against the management. From the report, the investigation was made thorough and exhaustive, and embraced the period from 1870 to the present time, with a view to determine first, whether the management was *honest*, and secondly, whether it was economical. The conclusion reached is that the financial affairs have been honestly managed, and the board was unable to discover wherein there could be a reduction of expenses without a corresponding diminution of the benefits expected to be derived. As regards the treatment of patients, the report is equally satisfactory. Special inquiries and investigations were made respecting the sanitary condition of the Asylum, the medical and moral treatment, the dietary, the use of restraint and the general care of patients. The public are assured that good care and kind treatment are given to the inmates intrusted to the charge of the Institution. The

exhibit is such as to encourage the officers to continued exertion, and the people to increased confidence in the management of an institution founded and supported by public benevolence.

CONNECTICUT. *Report of the Retreat for the Insane: 1876.* Dr. H. P. STEARNS.

There were in the Retreat, at date of last report, 140 patients. Admitted since, 92. Total, 232. Discharged recovered, 33. Improved, 23. Unimproved, 27. Died, 11. Total, 94. Remaining under treatment, 138.

Some cases presenting features of unusual interest are presented in the remarks upon admissions and discharges. The percentage of recoveries is 35.8 upon the admissions of the year. The deaths calculated upon the number of patients under treatment is but 4.7. Dr. Stearns discusses the question of "governmental supervision of the insane." He speaks in favor of the plan in operation in England and Scotland, but shows the impossibility of its adoption in this country in the form which alone has contributed to its success abroad. The objection to the establishment of a commission of lunacy is inherent in the formation of the general government of the United States, and must be, so long as each State is guaranteed the right of regulating its own internal affairs. Whatever is done in this direction must be done by the States individually, but no one State has a sufficient number of asylums or of inmates to render it possible to carry out fully the plan proposed. The State of New York is noticed as having the largest field for the operation of the commission. The Doctor, however, ignores the fact that this alone of all the States has now, and has had for several consecutive years, a Commissioner in Lunacy, under whose administration the best and most perfect lunacy law in

existence in the country has been passed and is now in successful operation ; a law which guards both the interest of the patient and that of the public, and which will compare favorably with that of any country.

In other States the experiments have been made of appointing boards of commissioners, but from the small number of asylums, or from causes inherent in the boards themselves, they have proved a failure. The work of supervision has been relegated to State Boards of Charity or directly to the people. Such arguments as the Doctor presents, coupled with the experience of States where the trial has proved such a complete failure, ought to silence the clamor of the few who demand such impracticable schemes.

An appendix accompanies the report showing the statistics relating to readmissions, a subject which has attracted considerable attention among some of the superintendents of the New England asylums.

MASSACHUSETTS. *Report of the Boston Lunatic Hospital: 1876.*
Dr. CLEMENT A. WALKER.

There were in the Hospital, at date of last report, 203 patients. Admitted since, 25. Total, 228. Discharged recovered, 7. Improved, 3. Unimproved, 2. Died, 24. Remaining under treatment, 192.

The Doctor gives a brief historical view of the changes which have occurred during the 25 years the Hospital has been under his management. This includes a reference to the changes in the building, to its appointments and furnishing, to the advances in moral and medical treatment, to the increase in the number of employes, and in the many physical comforts for patients and those engaged in their care.

NEW YORK. *Report of the New York City Lunatic Asylum, Blackwell's Island: 1876.* Dr. R. L. PARSONS.

There were in the Asylum, at date of last report, 1,233 patients. Admitted since, 478. Total, 1,711. Discharged recovered, 159. Improved, 53. Unimproved, 39. Not insane, 4. Died, 97. Total, 352. Remaining under treatment, 1,359.

The report is largely occupied by a statement in detail of the improvements made during the year. These consist of an enlarged dietary, increase in the supply of clothing, the employment of additional subordinate officers and attendants, the erection of three pavilion wards, the substitution of paid helpers in place of the inmates of the workhouse, the construction of roads, filling up of marshes, and the preparation of a bathing house. The great need of the asylum is that of increased accommodation. A table of the probable increase in the number of patients during the next five years, drawn from the average percentage of increase for the past ten years, shows that in 1881 there will probably be 2,172 insane women patients to be provided for at public expense. There are now in the asylum 1,359 patients. These figures are given to forewarn the public and the authorities of what must be done in the immediate future in the way of provision for this dependent class.

VIRGINIA. *Report of the Virginia Eastern Lunatic Asylum: 1877.* Dr. H. BLACK.

There were in the Asylum, at date of last report, 303 patients. Admitted since, 75. Total, 378. Discharged recovered, 39. Improved, 6. Died, 31. Total, 76. Remaining under treatment, 302.

To relieve the present crowded state of the house, and to provide accommodations for applicants for ad-

mission, Dr. Black recommends the passage by the Legislature of an act "authorizing the superintendents to grant leaves of absence for a limited period, say sixty days, to such patients as in their judgment could be confided to their friends willing to take them, and with authority to extend the same from time to time as might be found expedient." This course was pursued by Dr. Stribling and has been continued by Dr. Baldwin, his successor, in the Virginia Western Asylum. During the past twenty months the present superintendent, Dr. Black, has extended furloughs to forty-three patients, and, as is claimed, with beneficial results except in two cases. The next recommendation is for an act authorizing the Board of Directors to provide homes for such of the chronic insane as the superintendent may recommend as being harmless and incurable, and to pay for their care and maintenance such compensation as may be agreed upon not to exceed \$150 per annum. The arguments in favor of this course are presented at some length, and the case of Gheel is cited as showing the workings of such a system. It is computed that in this Institution at least 85 might be thus disposed of and an equal number might be received from those who are now retained in the jails of the State.

A division of the State by counties into two districts, it is thought, would prove advantageous and economical in saving expense in transportation. A table is given showing the amount of labor performed by patients in the Asylum, and the percentage of those employed to the whole number. This for the men amounts to 58.7 per cent., and for the women to 59. Improvements have been made which increase the light and ventilation in certain portions of the Asylum, and thirteen additional beds have been provided.

VIRGINIA. *Report of the Virginia Western Asylum*: 1877.
Dr. R. F. BALDWIN.

There were in the Asylum, at date of last report, 356 patients. Admitted since, during biennial period, 137. Total, 493. Discharged recovered, 68. Improved, 15. Unimproved, 3. Eloped, 1. Died, 45. Total, 132. Remaining under treatment, 361.

Upon the subject of curability of insanity, Dr. Baldwin furnishes additional proof of the importance of early treatment, in a table giving the percentages of recoveries in cases admitted to the Asylum. This shows that in cases placed under care, of less than one month's duration, 80 per cent. recovered; under three months, 62.2 per cent.; under six months, 56.5; under twelve months, 47.; one year or over, only 16 per cent. recovered. The use of mechanical restraint under proper regulation and restrictions is advocated. He reports 347 applications for admissions rejected at both the State asylums, and not subsequently admitted, since 1874. The financial condition of the Asylum is certainly favorable, as there is a balance of \$10,000 now in the treasury.

VIRGINIA. *Report of the Central Lunatic Asylum*: 1877. Dr. RANDOLPH BARKSDALE.

There were in the Asylum, at date of last report, 234 patients. Admitted since, 46. Total, 280. Discharged recovered, 37. Improved, 1. Not insane, 1. Died, 12. Total, 51. Remaining under treatment, 229.

The system of discharging patients upon probation has been introduced, and under such limitations as have been used it is pronounced a success. The use of restraint, under constant direction of the medical officer, is found necessary and sustained in the report. A defi-

ciency of nearly \$3,000, due to the failure of the State Treasurer to pay in full the amount of the annual appropriation, is reported.

PENNSYLVANIA. *Report of the State Lunatic Hospital, Harrisburg: 1877.* Dr. J. CURWEN.

There were in the Hospital, at date of last report, 416 patients. Admitted since, 159. Total, 575. Discharged recovered, 27. Improved, 34. Unimproved, 35. Died, 32. Total, 128. Remaining under treatment, 447.

The trustees report improvements in the building. New floors have been laid, bay windows made in the center of the wards, and the small ones at the ends greatly enlarged, the walls have been painted and adorned with pictures. All of these changes have added much to the cheerful appearance of the wards, and to the happiness and comfort of the inmates. Dr. Curwen's report consists of an analysis of the admissions and the causes operating to increase the number of chronic insane under treatment in the Asylum..

WASHINGTON, D. C. *Annual Report of the Government Hospital for the Insane, Washington, D. C.: 1877.* Dr. CHARLES H. NICHOLS.

There were in the Hospital, at date of last report, 744 patients. Admitted since, 198. Total, 942. Discharged recovered, 83. Improved, 40. Unimproved, 2. Died, 52. Total, 177. Remaining under treatment, 765.

The most marked feature in the present report is the account of the overcrowding to which the hospital is subjected. The present buildings were intended to accommodate 563 patients, while at this date, June, 1877, 765 were actually provided for. This number is 202

in excess of its capacity, and the condition is growing worse annually. The retirement of Dr. Nichols from the charge of the institution, after a service of twenty-five years, is noticed and his success as a superintendent is spoken of in terms of high commendation.

CALIFORNIA. *Biennial Report of the Insane Asylum of the State of California*: 1877. Dr. G. A. SHURTLEFF.

There were in the Asylum, at date of last report, 1,302 patients. Admitted since, a period of two years, 615. Total, 1,917. Discharged recovered, 335. Improved, 81. Unimproved, 9. Died, 272. Eloped, 25. Total, 722. Remaining under treatment, 1,195.

The asylum at Stockton is the largest State institution for the care of the insane in the United States. It had its origin in 1853 by an Act of the Legislature, which dedicated all the buildings and appurtenances of the former State General Hospital at Stockton for the purposes of an Insane Asylum. At this time the erection of the buildings which constitute the present asylum was commenced. These have been increased in number and enlarged in capacity from time to time till the accommodations have reached the large figures given in the report. In 1850, fourteen insane persons were sent to the station house in San Francisco, and at the close of the year it was estimated that the whole number was twenty-two. During 1851, the State General Hospitals at Sacramento and Stockton cared for the insane, and, in 1852, 124 insane patients were received into the hospital at Stockton. In 1853, the whole number admitted to the then State Asylum was 160. The facts are recalled by Dr. Shurtleff in his report for 1876. The slight decrease in the number of patients is attributed to the opening of the new asylum at Napa. It is feared that even with these addi-

tional accommodations, the number of patients under treatment at Stockton will soon be increased beyond the former limit.

The most marked improvement recorded is the new water supply. The tank raised to the height of 50 feet upon a wooden trestle has been replaced by a brick structure. A tower 16 feet at the base, tapering slightly, which, at the height of 35 feet, holds an iron tank of 8 feet in diameter and at the top, an elevation of 51 feet, another tank of 11 feet in diameter has been erected. This is substantially built and gives satisfaction in its use.

CALIFORNIA. *Report of the Napa State Asylum: 1877.* Dr. E. T. WILKINS.

There were in the Asylum, at date of last report, 208 patients. Admitted since, 451. Total, 659. Discharged recovered, 140. Improved, 30. Unimproved, 18. Not insane, 23. Died, 49. Eloped, 4. Total, 264. Remaining under treatment, 395.

The report of the trustees is largely occupied with the detail of the financial difficulties under which they have labored. These have been numerous and the labor connected therewith perplexing and onerous. The final settlement in some instances awaits the adjudication of a court and further action by the Legislature.

The report of Dr. Wilkins touches upon the treatment adopted in the Asylum and the necessity of additional provision for the insane. In this connection, he recommends the establishment of a State almshouse for the reception of the chronic insane. The Institution labors under some serious disadvantages. The water supply is inadequate for all the purposes of the Asylum. The use of kerosene lamps is necessitated by

the inability to erect gas works, and there is need of additional outbuildings, barns, etc. Should the Legislature respond to the requests for appropriations, all of these wants will be speedily supplied.

WISCONSIN. *Report of the Wisconsin State Hospital for the Insane: 1877.* Dr. D. F. BOUGHTON.

There were in the Hospital, at date of last report, 354 patients. Admitted since, 144. Total, 498. Discharged recovered, 45. Improved, 21. Unimproved, 21. Died, 28. Not insane, 1. Total, 116. Remaining under treatment, 382.

The report is occupied almost exclusively with a recital of the needs of the Hospital in the way of repairs and improvements, as a basis for the appropriations asked from the Legislature and with an account of the improvements already made. The most important of these is the new water supply from the lake, which is now abundant in amount and of excellent quality, and furnishes, so far as is possible, a full protection against fire.

It is proposed to establish a large dairy of eighty-five cows, which will provide sufficient milk and butter for the institution. It is recommended that the gasoline works be replaced by arrangements for the manufacture of gas, as the former has been proved to be dangerous to life and to property from its liability to explode.

WISCONSIN. *Report of the Northern Hospital for the Insane: 1877.* Dr. WALTER KEMPSTER.

There were in the Asylum, at date of last report, 503 patients. Admitted since, 201. Total, 704. Discharged recovered, 40. Improved, 36. Unimproved, 49. Died, 42. Total, 167. Remaining under treatment, 537.

The Institution is now filled to the extent of its accommodations, and additional cases are only received by an exchange for those which are thought to be less troublesome. The subject of hereditary transmission and the interchange which takes place between consumption and epilepsy, and other of the neuroses, and insanity, receives attention, and some marked instances are recorded. To provide for the insane of the State it is proposed to enlarge the Institution, and a plan is presented. The improvements of the year, in the erection of new, and enlargement of the former outbuildings, the introduction of improved heating apparatus, the building of roads, the laying out of the grounds, give evidence of a large amount of labor performed.

Dr. Kempster has added to his report an appendix, treating of the legal relations of the insane. A history is given of views entertained upon the subject of insanity by the legal profession, and of the decision of the courts from the earliest English records, including recent decisions by American tribunals. He presents his own views regarding insanity, the mind, and mental operations in health and disease, and also the definition of terms employed in the study and investigation of the subject. He points out, and properly characterizes many of the incorrect theories regarding responsibility before the law, which have long prevailed among members of the legal and medical profession, and sustains the belief in the unity of the mind, and in insanity as a cerebral disease. A compilation of the laws of the State, relating to the insane, completes the report.

TRANSACTIONS OF SOCIETIES, REPORTS AND
PAMPHLETS.*Transactions of the International Medical Congress.*

The volume of transactions contains a full report of the proceedings and of the papers read before the International Medical Congress, which was held in Philadelphia in September, 1876, under the auspices of the Centennial Medical Commission of Philadelphia. The congress was held for six consecutive days, and the work was greatly expedited by divisions into sections, nine in number. Addresses were made daily before the whole number of assembled delegates, while papers were read and discussed in the various sections, and the conclusions adopted by each section were reported to the congress. The address and papers constitute a volume which has never been surpassed in the annals of medical science in America. They were contributed by the best minds in the profession, and represent the most scholarly and advanced views upon the various topics discussed. The most of them are from the pens of American authors. In commemorating the centennial year of the nation's history, many of the addresses refer to the progress in the different departments of medicine in America during the past century. That this is referred to with a feeling of pride and self-gratulation is natural and justified by the facts. It is a difficult task, and one which we shall not attempt to point out the merit of any single effort where there is so much that is good and valuable. There can be but one opinion of the work and of the congress, and that was expressed by all, both at home and from abroad, that it was a grand success—creditable to the nation and to the profession. Too much praise can not be accorded to the gentlemen of the city of Philadelphia

and of the State of Pennsylvania, who contributed so freely and cheerfully in time and in means to promote the objects of the congress. To the president, Prof. Gross, to the officers, and to the efficient committee of publication, whose labor, though perplexing and arduous, was so well done, the thanks of the profession are due.

Medical and Surgical Reports of the Boston City Hospital:
1877.

The practice of utilizing for the benefit of the profession at large the labors of the comparatively few, who have the advantage of hospital practice, is now becoming quite general. Many of the reports of hospitals are valuable in that they serve to render more familiar, forms of disease which are comparatively infrequent, difficult to diagnosticate, or in which the best methods of treatment are still under question. Some of the most valuable medical literature of the day is to be found in these reports and in the transactions of the various medical societies. They make manifest the superiority of organized, combined effort over separate, individual labor. The report of the Boston Hospital is in some respects a notable work. It treats of a variety of surgical diseases, some of its articles being able monographs upon special subjects. It reproduces many of the most interesting cases which have been under treatment during the year. The description of the hospital is in itself a valuable article on hospital construction. It is beautifully and profusely illustrated, and put forth in a most attractive dress. The editors are Dr. David W. Cheever and Dr. F. W. Draper.

Third Biennial Report of the Board of State Commissioners for the general supervision of Charitable, Penal, Pauper and Reformatory Institutions of Michigan: 1877.

There are two insane asylums under the supervision of the Board, one at Kalamazoo erected in 1859, and the new one at Pontiac, which will be opened for the reception of patients in 1878. In 1873, \$400,000 was appropriated for its erection. It will have a capacity for 350 patients. The Commissioners say of it, that it "will present to the admiration of all beholders a wonderful exhibition of combined economy and ornamental structure, without a parallel in the institutions of any State," and further that "it is the expectation of the building commissioners that they will be able to complete the building for the amount appropriated." This is certainly high praise to be awarded to any institution and will necessarily subject it to the closest scrutiny of all interested in such structures. The statement can at present only be accepted in full faith of its truthfulness, and it is hoped that it may be verified after the building is completed. Of the Kalamazoo Asylum its officers and management, the Board speaks in terms of high commendation.

The number of insane in the State is given as probably 1,500, and accommodations will be provided for about 1,000 patients. This is thought to be ample for all who will apply for admission. An appendix is added to the Report giving an abstract of the proceedings and papers read before the meeting of the county Superintendents of the Poor for the year 1876. Among them we find one by Dr. E. H. Van Deusen, Superintendent of the Kalamazoo Asylum, upon "State provision for the Insane." In this the duty and action of the State regarding the care of the insane is treated of in its legal and economic aspects, and valuable sugges-

tions are made, as to the direction and scope of efforts to improve the condition of the insane and to lighten the burden of their care to the State. A description of the various institutions, under the care of the Commissioners, their objects and their mode of conduct fill out a highly interesting report.

On Crime and Insanity. By JOSEPH WORKMAN, M. D., late Superintendent of the Toronto Asylum. [Read before the Meeting of the Canada Medical Association.]

Dr. Workman reviews the cases in which during the past two or three years he has been called as an expert. These were trials for the crime of murder in which insanity was interposed as a defence. Circumstances occurring since the trials, have furnished in some cases absolute, and in others strongly confirmatory proof of the correctness of the views expressed. These facts he presents before the Association in an admirably prepared paper, which does him great credit and will certainly please his large circle of friends.

Mental Hygiene for the Pupil and Teacher. A Lecture delivered before the Normal School at Chapel Hill, North Carolina, August, 1877. EUGENE GRISSOM, M. D., LL. D., Superintendent of the North Carolina Asylum for the Insane.

This address of Dr. Grissom has received high encomiums from both the medical and secular press. It exhibits considerable research in the number of gems from the best authors, regarding the influences most conducive to mental health and strength, and the proper methods of training the youthful minds. It is presented in the Doctor's most attractive style, with which, however, our readers are already acquainted.

The Influence of Alcohol. WILLIAM M. COMPTON, M. D., Superintendent of the Mississippi State Lunatic Asylum. [From the Report of the Mississippi State Board of Health, December 1, 1877.]

The subject is treated under three heads: 1, Alcohol as a food; 2, Alcohol as a medicine; 3, Alcohol as a cause of disease. It is a full and interesting report of the mode of action of spirituous liquors upon the circulatory and nervous system of man.

General Index of the New York Medical Journal, from 1865 to 1876.

This is a neatly bound volume of 143 pages, and will be invaluable to those who have preserved files of the *Journal*, and to all who may have occasion to consult its pages.

Transactions of the Meeting of the Association of the Alumni and Officers of the Medical Department of the University of Buffalo for the years 1875, 1876 and 1877.

Lead Poisoning in Frogs. By JOHN J. MASON, M. D. [Reprinted from the *New York Medical Journal*, July, 1877.]

Report on Otology. A paper read before the Maine Medical Association. E. E. HOLT, M. D.

The Safety of Ships, and Those who Travel in Them. JOHN M. WOODWARD, M. D. [Reprinted from Volume III, Public Health Papers.]

CARE OF THE CHRONIC INSANE IN THE STATE OF NEW YORK.

RULES AND REGULATIONS, ESTABLISHED BY THE STATE BOARD OF CHARITIES, FOR THE GOVERNMENT OF COUNTY INSANE ASYLUMS, EXEMPT FROM THE OPERATION OF THE TENTH SECTION OF THE WILLARD ASYLUM ACT, AS PROVIDED BY CHAPTER 713 OF THE LAWS OF 1871.

Adopted October 16, 1877.

1. MEDICAL SUPERVISION.

The proper authorities of each and every such County Insane Asylum, in which the number of insane persons detained therein shall be less than one hundred, shall appoint a physician to such asylum, acceptable to the commissioner of the State Board of Charities of the district in which the asylum is situated, who shall be designated the visiting physician of such asylum, and who shall visit the wards and rooms, occupied by the insane of the institution, daily, and as much oftener as in his judgment the welfare and comfort of the insane may require.

In every such County Insane Asylum, where there are more than one hundred insane persons detained therein, the proper authorities of such county shall appoint a physician to such asylum, acceptable to the commissioner of the district in which the asylum is situated, who shall be designated the resident physician of such asylum, and who shall not only visit the wards and rooms of the insane daily, but whose whole time shall be at the service of said authorities as may be required. Said authorities are hereby required to erect or provide, as soon as the same can conveniently be done, suitable dwelling and office accommodations, in

order that the resident physician can reside with his family either in or contiguous to the asylum for the insane, unless the commissioner of the district deems that additional dwelling and office accommodations are not, in his judgment, needed.

The visiting physician or the resident physician so appointed, shall be the chief medical officer of such asylum, and shall have the medical supervision and treatment of all insane persons committed thereto, and he shall make requisition for, and have the control and distribution of the medical supplies, hospital stores, and other appliances, for the treatment of the insane in such asylum.

2. ATTENDANTS.

The proper authorities of each and every such County Asylum, shall appoint a properly educated chief male attendant and a chief female attendant, to be acceptable to the visiting or resident physician thereof, and the number of attendants in each and every such County Insane Asylum, for either sex, shall equal one to every twenty insane persons or fractional part thereof, exceeding one-half that number, in any ward of such asylum; provided that no pauper or other inmate of any poor-house or almshouse shall be appointed such attendant, and provided also that the appointment of such attendants shall be approved of by the visiting or resident physician of such asylum, and that they shall subscribe and agree to maintain the rules and regulations thereof.

3. DIET, CLOTHING, CLASSIFICATION, RESTRAINT, AMUSEMENTS, OCCUPATION, ETC., FOR THE INSANE.

The proper authorities of each and every such County Asylum shall, within three months, with the approval

of the visiting or resident physician thereof, and the written concurrence of the commissioner of the district in which the asylum is situated, establish rules and regulations, upon the following and such other points as they may deem advisable relating to such asylum, which rules and regulations, so far as practicable, shall conform to the rules and regulations now in force at the State Lunatic Asylum at Utica, viz:

1. As to the diet of the insane.
2. As to special diet for the sick and infirm.
3. As to the clothing of the insane.
4. As to classification.
5. As to the means of restraint, by whom and when to be employed, how long continued, etc.
6. As to amusements for the insane.
7. As to the occupation of the insane.
8. As to the duties of the attendants.
9. As to the duties of the chief male attendant, which are intended to include these now performed by the supervisors and third assistant physician at said State Asylum; and he shall also keep such records of number, condition and treatment of the insane under the direction of the visiting or resident physician, or proper authorities of the Asylum, as the Board of Supervisors, or the State Board of Charities may require.
10. As to the duties of the chief female attendant, which are intended to include those of the matron in said State Asylum, and such other duties as may be required.
11. As to the sanitary condition of the asylum building and grounds.

SUMMARY.

We are sorry to announce the resignation of Dr. J. F. Ensor, Superintendent of the Insane Asylum of South Carolina. Our knowledge comes through the published correspondence between Gov. Wade Hampton and Dr. Ensor. It seems that the appointment of Superintendent is made by the Governor, on the recommendation of the Board of Regents. The letter of Dr. Ensor, which is dated December 1, 1877, is largely a review of his administration and of the improvements in the Institution made during that period. It is certainly a very admirable showing, and does Dr. Ensor great credit. His successor is Dr. Peter E. Griffin.

—Dr. John H. Callendar has been re-elected Superintendent of the Tennessee State Asylum for the Insane located at Nashville.

—Dr. William W. Strew has been appointed to the position of Superintendent of the New York City Asylum for Women, on Blackwell's Island, vice Dr. R. L. Parsons resigned.

—Dr. John C. Hall has been appointed Superintendent of the Friends' Asylum, at Frankford, to fill the vacancy caused by the retirement of Dr. J. H. Worthington, who has taken up his residence in Baltimore, No. 395 Madison Avenue.

—Dr. T. Mortimer Lloyd has been appointed Second Assistant Physician at the State Asylum for the Insane at Morris Plains, N. J.

—The Worcester Lunatic Hospital at Worcester, Mass., has removed to the new building, which is situated about two miles from the Union passenger station. The location is represented as very desirable, having good drainage, freedom from noxious emanations, ample grounds and pure air. The valley of Lake Quinsigamond, surrounded by hills, dotted with farm-houses and villages, is as charming as many a celebrated foreign landscape, and affords most delightful rides and rambles. The old Hospital building has been used, since October last, in accordance with the statutory provision, as an Asylum for the Chronic Insane. It remains under the charge of the former Board of Trustees, who also have control of the New Hospital. Dr. John G. Park, the Assistant Superintendent of the Worcester Lunatic Hospital, has been appointed Superintendent, and Dr. Enoch Q. Marston, late Assistant Physician at the State Almshouse at Tewksbury, has been appointed Assistant Physician.

AMERICAN JOURNAL OF INSANITY, FOR APRIL, 1878.

SUICIDE NOT EVIDENCE OF INSANITY.*

BY HON. O. H. PALMER, OF NEW YORK.

I do not know how it may be among scientific and professional men, but I think I am justified in saying that in the average mind there is a strong conviction that suicide is invariably the result of an insane impulse—in other words, that the act itself is conclusive evidence of insanity. I venture to say that in half the cases, if you put the question to an unprofessional man and ask an opinion, this will be the reply. The common belief is, that no man will take his own life unless demented or insane. It is because we can not readily comprehend that one in his right mind would throw away life, which we regard as a precious blessing, and take the chances for a future existence wherein, according to our Christian doctrine, the very act of *felo de se*, by a responsible being, is accounted a heinous crime deserving infinite punishment. The object of the present paper is to show the unsoundness of this too generally received opinion, and to prove, so far as I may be able, from facts and authority, that it is not well founded. You will not expect of me a scientific treatise on the subject of insanity, nor that I shall undertake to point out the shadowy line that divides the sane from the insane. I shall assume that there is a

* Read before the Medico-Legal Society of the city of New York.

sane condition as well as an insane condition of the mind. I shall not take it for granted, as has been intimated by certain skeptics, that all mankind are lunatics.

The manifestation of states of mind is not uniform, but it is as varied and dissimilar as the expression of the human face, or conformation of the human brain. There is no mathematical standard for the mind to which we can apply the square and compass, and determine and measure it. You who believe that the welfare and prosperity of the country depend upon the establishment of a sound financial system, and that the only true standard of value is the gold dollar, will hardly be justified in pronouncing insane those who insist upon the dollar of our fathers and the modern greenback as a cure for all our financial evils. From their standpoint, they would have the right to apply the epithet to you. They may seem insane to you, and, *vice versa*, you may seem insane to them. The man of defective vision, who insists that blue is black, may be just as sane as the man of perfect vision, who can give colors their true character. The diversity of manifestation is immense, unmeasurable and unascertainable. But this does not prove insanity, or derangement of the normal condition of the intellect. Sanity is the normal condition of the mind in all its diversities and variety of character. This is law as well as logic.

This principle is now too well established in this country to be doubted or questioned, and yet outside of the literature of the courts, it has but few believers. If any one doubts the fact, let him attend the impanelling of the next jury in a case where the question is to be tried, when it is important to exclude from the jury-box such jurors as believe that suicide is of itself evidence of insanity, and he will doubt no longer. It

is well known that Life Insurance Companies decline to insure against suicide, and provide in their contract that if the insured feloniously destroy his own life they will not be liable. It is a risk they will not assume. The question is, therefore, frequently presented in the courts, and the provision is invariably sought to be avoided by alleging insanity. Hence the great importance of a correct understanding of the question involved in this discussion. Unless the popular belief can be corrected, the protection sought by the contract is of no avail, and the provision might as well be abandoned. It is believed that the stability of any system of insurance depends upon the right of the underwriter to determine what risks he will insure against, as well as upon an intelligent administration and application of the laws governing and protecting it. Disbelief in the doctrine that sanity is the normal condition of the mind, and belief in the doctrine that self-destruction arises from insanity, are heresies in the public mind which all reflecting men will say should be corrected. The true doctrine in respect to both of these heresies is abundantly established by the decisions of our highest courts, State and National. See *Coffee vs. The Home Life Insurance Co.*, 35 N. Y. R., 314; *Weed vs. The Mutual Benefit Life Insurance Co.*; *Van Zandt vs. The Mutual Benefit Life Insurance Co.*, 55 N. Y. R., 169; *McClure vs. The Mutual Life Insurance Co.*, 55 N. Y. R., 651; *Terry vs. The Mutual Life Insurance Co.*, 15 Wallace, 580; *Charter Oak Life Insurance Co. vs. Rodd*, in the U. S. Supreme Court.

These cases establish the doctrine that there is no presumption of law, *prima facie*, or otherwise, that self-destruction arises from insanity.

If all mankind had implicit confidence in the decisions of our courts, I might safely rest the case upon

these decisions; but unfortunately this is not so, and I deem it justifiable, therefore, to fortify my position by proving the soundness of the rule, independent of judicial authority.

The law also regards suicide, *felo de se*, as a crime, putting it in the same category with murder. It has been so held for many centuries, not only by the State, but by the Church. In the Greek Church, and in the Roman Church, as well as in the Protestant Episcopal Church, it is severely condemned, and the burial service provides that the prescribed office for the burial of the dead is not to be used for any who have laid violent hands upon themselves. In England this crime was punished not only with forfeiture of estate, but the body of the *felo de se*, or self-murderer, was required to be buried in the open highway or cross roads, and a stake thrust through it to mark the public detestation. This law, I am happy to say, is not now in force, having been repealed during the reign of George the Fourth; but even now, I believe, the body of the suicide is required to be buried at night without the performance of religious rites.

By the common law, also, if any one encourage or assist another in the commission of suicide, he is guilty of murder as a principal, and, by the ancient common law a will of personal property was made void by the testator's subsequent act of self-destruction. Now these laws of the State and of the Church must be founded upon the idea of suicide without insanity; otherwise they would be monstrous.

If suicide were invariably the result of insanity, according to what may be termed the present popular belief, the law-makers and religious teachers for many centuries have been guilty of the most enormous crimes.

By reference to the text-books upon this question, we find abundant authority to sustain our position.

In Wharton and Stillé's Medical Jurisprudence it is held that the propensity to self-destruction may co-exist with sanity; that, whatever certain scientific authorities may assert, we are not warranted in coming to the conclusion that suicide is always the symptom or result of insanity; that there is no insanity present where the feeling of disgust with life is in exact relation with the circumstances; when evident moral causes exist which sufficiently account for the act; that when a man of delicate feeling puts an end to his existence, that he may not survive the loss of his honor or of some highly valued possession which forms an intimate part of his intellectual being, and when a man prefers death to a miserable, contemptible life, full of mental and physical ills, although morality may indeed call him to account for the deed, yet there exists no ground for us to consider him insane; that the abhorrence of life and the idea of self-annihilation correspond to the intensity of the painful impressions which bear upon the individual, and it is after deliberate reflection that the act is resolved upon and perpetrated.

The court says in the case of *Brooks vs. Barrett*, 7 Pickering, decided in 1828, that the law does not consider the act of suicide as conclusive evidence of insanity; on the contrary, it is held as a crime, unless insanity be proven; that the presumption of law is, that all men are of sane mind, and those who would defeat this presumption by a suggestion of insanity, must prove the exception to the general rule.

This doctrine has been handed down through the courts for many generations, and one would suppose it was now too well established to be questioned; but strange as it may appear, not long since a judge of one of our New York courts deliberately held, in an action upon a life insurance policy, that suicide *per se* was

evidence of insanity, and so ruled in the case before him, and that the burden of proof that the *felo de se* was not insane was upon the defendant. That judge would, of course, have ruled, if the question had arisen in respect to the ancient Stoic or Epicurean philosophers who destroyed themselves, claiming the act to be one of heroism, that they were all insane. Among the ancients suicide was neither considered criminal nor dishonorable. Demosthenes, Thucydides, Mark Antony and Cleopatra believed in it. Cato, rather than live under the despotism of Cæsar, stabbed himself, and, when the wound had been stanchèd, tore off the bandages and accomplished his purpose. Even the Scriptures and the Apocrypha furnish notable examples, as Eleazar, who, thinking he might deliver his people and secure glory and a perpetual name by killing King Antiochus, permitted himself to be crushed by the elephant that wore the royal harness.

Saul, because hard pressed in battle, rather than fall into the hands of the Philistines, took his sword and fell upon it, and so died.

Samson was betrayed into the hands of the Philistines by the woman in the valley of Sorek—as many others have been through the pursuit of illicit pleasure. The love of silver made her treacherous and dishonest; not that she sought to cheat her creditors by clipping the dollar, but was content to secure the treasure by clipping the locks of her deluded lover. As the green withes and new ropes failed to subject him to her power, so that she could deliver him to his enemies, she induced him to sleep upon her knees, and her victory was complete. Poor fellow, fool as he was, henceforth his life became a sore burden and made him the fit subject for suicide. His eyes were put out; he was bound in fetters of brass, cast into prison, and forced to work

upon the treadmill. To add to his humiliation and sorrow, his enemies—forgetting that his hair had begun to grow—unbound him, that he might make sport for them while they were revelling over his degradation. In his agony of revenge, he prayed to God for a momentary return of his strength, and then, saying, "Let me die with the Philistines," seized the main pillars of the house, one with the right hand and one with the left, and bowed himself in his might, and the house fell upon him and his enemies, and he died with them.

Ahithophel, when his counsel was disregarded by his king and that of a rival adopted, arose and saddled his ass and got him home to his house and to his city, and put his household in order, and hanged himself, and died, and was buried in the sepulchre of his fathers.

Judas Iscariot, another devotee at the silver shrine, and whose name, I presume, is familiar to most of you, through remorse—not insanity—went and hanged himself. No investigation in this case—not even a coroner's verdict of temporary aberration of mind!

In speaking of the ancients, I ought perhaps to make some exceptions. Pythagoras, for instance, was evidently an exception to his time; for he not only opposed suicide strongly in theory, but called the act base and cowardly. Zeno and Epicurus, however, more fairly represented the condition of the heathen world. They were the founders respectively of the Stoic and Epicurean schools. They arrived at about the same results in their systems of philosophy, though they proposed to reach their objects by different roads.

Epicurus maintained that peace of mind was the "*summum bonum*," and that this was to be secured by cultivating and gratifying the mind's highest development. Zeno strove for what he called "unanimity of life," meaning by that a life inwardly harmonious and

undisturbed, to be gained by crushing out the feelings and passions. In the opinion of both of these eminent men suicide was preferable to great pain or disgrace. This view accorded well with their theories, but it may be doubted whether they did not rather embody in them the principles professed by almost all the cultivated men of the age, than deduce these results logically from the premises given. At all events, it is certain that men eminent in every calling, whether philosophers or not, killed themselves rather than be dishonored.

The generals Hannibal and Mithridates poisoned themselves rather than be taken prisoners. Even Cicero, coward though he was, doubted whether suicide would not be better than exile; and the touching story of Lucretia is never forgotten.

It must, however, be acknowledged that the professed philosophers were consistent in their practice.

Zeno, while going to lecture, fell down and put his finger out of joint. He returned home forthwith and hung himself. His successor as head of the school was Cleanthes. Cleanthes fell sick, and was advised by his physician to abstain from food. He did so, and his recovery was complete; but he thought that he had already gone so far on the road to starvation that it was not worth while to turn back and begin eating again, and so he died.

Perhaps the most striking case of determination among the philosophers who killed themselves was that of Seneca, himself a eulogist of suicide.

The old man, evidently trying feebly to imitate Socrates, called his friends around him and had his veins opened. His blood, however, was scanty in quantity and slow of motion, and in order to hasten his death he was put into a warm bath. Still the slowness of his circulation resisted the stimulant, and he called for a

cup of poison and drank it. But the spark of life seemed to be as tenacious as it was feeble, and he was only killed at last by being suffocated in a stove.

Pliny, reaffirming the doctrine of Xenophon, says in his work on natural history: *Deus non sibi potest mortem consciscere si velit, quod homini dedit optimum in tantis vitæ pœnis.* "God can not end his own life though he wish, but has given to mortals this best of boons amid the burdens and trials of life."

Valerius Maximus, who wrote in the first century, states that a poisonous liquor was kept publicly at Marseilles, and that it was given to such as exhibited themselves to the Senate, and procured its approval of the reasons which prompted them to get rid of life; that the Senate examined their reasons with care, and after deliberating whether the applicants were justified in wishing to leave the world, gave or refused its sanction accordingly. If other poisonous liquors, the use of which probably more than any other single cause leads to suicide, could be prescribed only under similiar sanctions, we should have the best excise law the world has ever seen.

Ælian, writing in the third century, affirms that the inhabitants of the Island of Ceos, in Greece, when they found themselves incapable, by reason of decrepit age, to serve the public, were accustomed to meet at an entertainment and drink hemlock juice, the State permitting those who were weary of life to thus poison themselves.

The ancients, at all events, did not agree with the New York judge in considering the suicide necessarily insane.

It is true, the subject of suicide has as yet but a scanty literature, especially in this country, and the little that does exist is not very satisfactory. One rea-

son for this is that any complete study of the subject ought to be based upon a wide induction, and this can only be reached by careful statistics, almost wholly unattainable anywhere until within a few years. Many physicians have touched upon the subject, as for instance, Dr. Maudsley, in his "Responsibility in Mental Disease;" but physicians generally begin to consider the subject on its diseased side, and are apt to incline to the belief (which I hope to convince you is wrong) that suicide is positive proof of insanity.

Of the English works on suicide by writers not medical, the most ambitious is the "Anatomy of Suicide," by Forbes Winslow, published in 1840; then going back we find a worthless book by Solomon Pigott, 1824, written from the Sunday-school point of view; and last, and most worthy of notice, a two-volume octavo work by Charles Moore, printed in 1790. Moore, though he was a vicar at Oxford and dedicated his book to the Archbishop of Canterbury, had a mind impartial as well as highly cultivated, and had evidently studied his subject deeply.

I quote a few words from his book, which show that the insanity theory of suicide is not the pure growth of modern science, but was held by some people as far back as 1790. "But some," says Moore, "who are ever desirous of leaning toward the side of humanity, are inclined to judge that the very act of suicide, being so horrid and unnatural, implies a subversion of the brain or a species of madness. This, however, is deciding too favorably of the matter."

The severity of the penalties inflicted upon the bodies, estates, and descendants of the *felo de se*, to which I have adverted, has undoubtedly had a powerful influence in propagating the belief that suicide was the result of insanity. It was to avoid those horrid penalties,

that coroners' juries were originally accustomed to bring in verdicts that the suicide was insane. Bentham says, "English juries did not hesitate to violate their oaths by declaring the suicide *non compos*." At the time, mercy seemed to make this finding a necessity. It was the outcome of humanity in defiance of a barbarous and revolting law. Although the necessity has passed away, the result of this forced education is yet manifest, and the coroner's jury of to-day, especially if it can be impressed with the idea that benefit is to accrue to the surviving friends, is almost invariably inclined to return the verdict stereotyped three hundred years ago, "Suicide, while laboring under temporary aberration of mind."

Lecky, in his "History of European Morals," says:

The effect of the pagan examples may frequently be detected in the last words or writings of the suicides. Philip Strozzi, when accused of the assassination of Alexander L., of Tuscany, killed himself through fear that torture might extort from him revelations injurious to his friends, and he left behind him a paper, in which, among other things, he commended his soul to God, with the prayer that, if no higher boon could be granted, he might at least be permitted to have his place with Cato of Utica and the other great suicides of antiquity.

The ancient heathen philosophers to whom I have referred are not the only advocates of the crime of suicide. It has had its defenders, and powerful ones too, in more modern times—Rousseau, Madame de Staël, Gibbon, Hume, Dr. Donne, Montaigne, Montesquieu, and others. We do not know nor can we tell the extent of the influence of the teaching of these apologists of suicide upon the thousands that annually seek, as a matter of choice, this relief from the ills of life while in the full possession of their mental powers. It would be a happy relief, were it true, to think that none but the insane shuffled off the mortal coil in that way.

Even under British rule in India to-day, suicide is very common, and more or less tolerated of necessity by the authorities. Among the many castes in that country is one held in high esteem by reason of the great importance of the service its members perform as carrier-messengers and mail-carriers. Strange as it may seem, suicide has been the protection of this caste against brigands and highwaymen from time immemorial. A peculiar and terrific custom of this caste is maintained as a necessary safeguard to its calling. A carrier who has been robbed is deemed to have been despoiled of what is a thousand times dearer to him than life, his honor; and in the presence of the robber, after vainly giving him full warning and an opportunity to restore the property stolen from him, he kills himself; thereupon the whole caste of the carrier rises as one man and swears a remorseless vendetta against the thief, his family, kinsmen, friends and village, until the last soul of them is exterminated. There is no other atonement. The carrier, entering the service of the public, bound himself, by the most solemn and fearful oaths, under the sanction of his religion, to protect his caste and to punish any attempt to dishonor one of its members; the Brahmins consecrated this service by pronouncing the most appalling anathemas against the transgressor, and so the custody and transportation of property by one of their caste passed into a law. At this day, a package, however valuable, in the hands of one of these men is safer than though guarded by an army; much safer than public moneys under the control of politicians, or trust funds in the care of some savings banks. It might be a blessing if we had a similar caste in this country to declare a relentless vendetta against the thieves and robbers.

There is another Brahmin custom executed by this carrier caste, which may be termed a short and effectual

way for the collection of debts. In many of the provinces of Malabar, the carrier will become security for the payment of debts by pledging his life to the creditor, for proper consideration, that the debtor shall fulfill his obligations. If, on the day of payment, the creditor is not satisfied, the carrier goes and sits quietly on the debtor's veranda, and calls upon him to pay on the spot. If he refuse, the carrier makes a few incisions in his breast with his dagger, and in a loud voice gives notice that if, by sundown, the debt is not paid, he will plunge the dagger into his own heart, leaving vengeance to his caste. This process never fails; the debtor can not escape. Neither the ingenuity of lawyers, nor the weakness of judges, nor the stupidity of jurors can save him. No bills of exceptions or dilatory motions can postpone the day of payment.

The hari-kari custom of the Japanese is familiar to all, but there is another custom peculiar to them which perhaps is not so generally known. The man who resents an insult by disembowelling himself, goes out of the world in the happy belief that he can at once come back as an avenging spirit and work his enemy ten-fold more harm in that way; that he can hover about his path, make his plans miscarry, bring sickness and all sorts of evil upon him, and control his destiny to an evil end.

It was my purpose in the outset to present the statistics of this increasing and appalling crime in our own country; but to my great disappointment and amazement, I find it impossible. I have looked into the United States Census Reports. I could give you, from them, the number of the insane and the idiotic; the number of deaths by consumption and many other diseases; but not a word as to deaths by suicide. This subject, which I think is one of the greatest importance

in vital statistics, seems to have been wholly ignored. There are no reliable data in this country that I can find to enable me to lay before you the facts which, if available in detail, would fully verify the position I have assumed.

In some of the principal cities creditable efforts have been made to preserve the statistics, and the census of the State of New York for the year 1875, I am happy to say, has carefully tabulated the number of deaths by suicide in the respective counties of the State; but the basis is not yet broad enough to justify any general indication.

In many of the European countries, there is less embarrassment. In Germany and France, especially, great care is taken to ascertain and preserve the facts bearing upon the question. It is a shame that it has hitherto been so much neglected here. One of the most celebrated German writers on vital statistics, and who is of the highest authority on that subject the world over, Alexander Von Oettengen, has collected and collated the statistics of suicide in Germany and many other European countries, and has deduced therefrom some interesting general laws. He maintains that suicide is one of the strongest proofs of freedom of the individual will; that the possibility of taking one's own life, either from disgust or from higher motives, as in the manner of the Buddhists or Stoics, is evidence that a man is his own master; that the commission of crime, as well as suicide, in many cases shows strength of will; that, notwithstanding the love of life, the tendency to suicide remains, and the number of suicides increases; that the increase in the European countries is from three to five per cent, while the increase of population is less than two per cent; that this tendency varies according to the season of the year; that it is more fre-

quent in the hot summer months than in winter; that the heat seems to increase the tendency and debilitate the physical system or power of resistance; that every sinner carries the germ of suicide in him; that the bad deed itself is to be regarded as the ripe fruit which is shaken from the tree by the storms of social life; that while myriads have the germ or tendency to suicide in their hearts, it is only developed by circumstances; that society, generally, is involved in the responsibility of the increase of this tendency; that the rich, by helping the poor, succoring the distressed, inculcating sobriety and religion, might materially mitigate the growing evil; and that as each age has its tendency to crime, so also it has its tendency to suicide.

Buckle, in his "History of Civilization," says:

It is an astonishing fact that all the evidence we possess respecting it points to one great conclusion, and can leave no doubt on our minds that suicide is merely the product of the general condition of society, and that the individual felon only carries into effect what is a necessary consequence of preceding circumstances.

He maintains that there exists a regularity in the entire moral conduct of a given society—that the crimes of murder and suicide, which might well be supposed the most arbitrary and irregular of all the offences, are "committed with as much regularity and bear as uniform relation to certain known circumstances as do the movement of the tides and the rotation of the seasons."

He illustrates this by contrasting the circumstances which surround the respective criminals.

Of the crime of murder:

When we consider that this, though generally the crowning act of a long career of vice, is often the immediate result of what seems a sudden impulse; and when premeditated, its committal, even with the least chance of impunity, requires a rare combination of favorable circumstances, for which the criminal will fre-

quently wait ; that he has thus to bide his time, and look for opportunities he can not control ; that when the time has come, his heart may fail him ; that the question whether or not he shall commit the crime may depend on a balance of conflicting motives, such as fear of the law, a dread of the penalties held out by religion, the prickings of his own conscience, the apprehension of future remorse, the love of gain, jealousy, revenge, desperation—when we put all these things together, there arises such a complication of causes that we might reasonably despair of detecting any order or method in the result of those subtle and shifting agencies by which murder is either caused or prevented.

Of the crime of suicide :

Among public and registered crimes there is none which seems so completely dependent on the individual as suicide. Attempts to murder or to rob may be, and constantly are, successfully resisted ; baffled sometimes by the party attacked, sometimes by the officers of justice. But an attempt to commit suicide is much less liable to interruption. The man who is determined to kill himself is not prevented at the last moment by the struggles of an enemy ; and as he can easily guard against the interference of the civil power, his act becomes, as it were, isolated ; it is cut off from foreign disturbances, and seems more clearly the product of his own volition than any other offense could possibly be. We may also add that, unlike crimes in general, it is rarely caused by the instigation of confederates ; so that men, not being goaded into it by their companions, are uninfluenced by one great class of external associations, which might hamper what is termed freedom of will. It may, therefore, very naturally be thought impracticable to refer suicide to general principles, or to detect anything like regularity in an offense which is so eccentric, so solitary, so impossible to control by legislation, and which the most vigilant police can do nothing to eliminate.

Yet he finds the same general law that in a given state of society a certain number of persons will commit murder, and a certain number put an end to their own lives by suicide.

I have seen a statement which strikingly illustrates this fact, namely, that in the year 1793 suicide became epidemic in the city of Versailles, in France, and

raged to such an extent that in that single city there were thirteen hundred cases during that year. Also, that at one time it broke out in the army of the first Napoleon, and threatened to decimate his force, and was only checked by the emperor's strong personal appeal to the patriotism, pride, and courage of his soldiers. Von Oettengen shows also that the suicidal tendency varies with the days of the week and hours of the day; that on Saturday fewer men take their lives, that being the day when wages are paid, and Sunday is before them; that on Monday and Tuesday, the per cent is much greater; that the difference between men and women in this respect is very characteristic; that the woman oftener commits suicide on Sunday, when the vagabond man leaves her to her care and sorrow—very seldom on Saturday, cleaning day, or on Monday, when her week's work begins; that, on the contrary, when the man's work begins, the percentage among men increases; that race and social circumstances have an important bearing upon the question: while in one of the provinces of France the deaths by suicide are 298 in a million of inhabitants, in Corsica, where murder is the common pastime, they are but 13.8; in Scandinavia, 126; among the Germans, 112; among the Roman races, 80; among the Slaves, 47; and in Prussia, 215.

Suicide occurs more frequently among prisoners and persons who lead bad lives; next, among servants and soldiers; next, among those who come in contact with the varnish and luxury of civilization, without being inwardly elevated or having developed self-reliance, for the reason that superficial culture leaves them less able to resist overwhelming calamities.

In respect to suicide, the ratio of women to men is as one to three; that in respect to crime as one to five; the tendency to suicide increases with age, the number

being far less between sixteen and forty than between fifty and seventy.

It is stated on the authority of Dr. De Boismont that since the beginning of the present century not less than 100,000 Frenchmen have committed suicide. I am inclined to think that large as the number is, it is understated. The statistics for the single year 1876 show the number for that year alone was 5,567, of whom 4,435 were men and 1,132 women; 29 were men under the age of 16, and 98 over 80; 1,828 were peasants, 1,038 of the working classes, 228 domestics, 987 of the liberal professions.

Among the causes assigned are the following; Drunkenness, 1,443; afflicted with incurable diseases, 798; domestic broils, 633; dread of poverty, 320. Less than one-third of the whole number in the sad list is charged to insanity.

It will be seen that all these facts when analyzed—and I might add many more—prove inevitably the fallacy of the theory that suicide is the result of insanity. There has been a custom among the Japanese which the most inveterate believer in the doctrine that suicide is, *per se*, evidence of insanity, would find it difficult to reconcile with his theory. If the Oriental desired to inflict sure and summary punishment upon his enemy, he would kill himself upon his enemy's front door-step, and such enemy was thereupon in duty bound to take his own life.

While the Jews and Persians share in our horror of suicide—for they set the highest value upon the earthly existence—a totally different feeling obtains among the Chinese, Japanese, Hindoos, Fijians, American Indians, Malaysians, and other nations. With these, the superior blessings of the future life over those of this form a part of the popular religious belief. The taking off of one's

self, under certain circumstances, is viewed as an act not merely pardonable, but heroic. To pretend that he who commits it under such predispositions and surroundings is *non compos mentis*, is clearly absurd. Says Elam, in his work entitled "A Physician's Problems:"

In our former investigations, also, we judged of the degeneration of the people in part by the excess of crime and the great frequency of suicide, but we can not with propriety apply that test to the Oriental people; we can not consider their statistics as equally significant with the records of crime in Western nations, seeing that many of those acts, which with us are referable to crime or mental alienation are, amongst the Orientals, to be considered as attached to mistaken notions of morals and religion, or as originating in peculiar legislative enactments.

Says the Abbé Huc, in his "Chinese Empire:"

It is almost impossible to imagine the readiness with which the Chinese commit suicide. It requires only the merest trifle or a word to induce him to hang or drown himself, these being the two kinds of suicide most in favor. In other countries, when a man wishes to avenge himself on his enemy, he tries to kill him; in China he kills himself. There are various reasons for this. In the first place, the Chinese government holds the person responsible for the crime of suicide who gave the offense which caused it. It follows from this, that if any one wishes to avenge himself on his enemy, he has but to kill himself to work him the direst woe. He falls into the hands of the executive, who at least torture and ruin him, if not take his life. The family of the suicide, likewise, generally obtains large pecuniary compensation; and it is not rare to see wretched beings, who are devoted to their families, go and deliberately commit suicide at the house of some rich person.

This pagan custom of self-immolation, through family devotion, has its counterpart and following even in civilized and Christianized nations. What life-insurance man does not know that many insured persons have unquestionably done the same thing, relying on rich insurance companies to provide for their families?

This was not exactly the feeling of the Western gambler who, notwithstanding his clear apprehension of the question, declined to play at a game where he had to die to beat the bank.

The spirit of self-sacrifice for the benefit of those we love is as old as history and as fresh as to-day. Curtius plunged into the yawning gulf to save his country. The pelican, which picks its own bleeding breast to nourish its savage young, has been adopted as the symbol and the title of one of the largest life offices of Great Britain; and who shall speak other than reverently of that played-out rake who took his own life, after liberally insuring it, in order, as he said, to enable his widow to start again with a younger and more vigorous man?

Hecker records, in his "Epidemics," that in the fourteenth century, during an epidemic of persecution of the Jews on the false and preposterous charge that they had poisoned the air and all the springs and wells, the poor Israelites deliberately immolated themselves by thousands. In some places, they fired their own quarter of the town, and so perished. At Strassburg, two thousand were burnt alive in their own burial-ground. "At Esslingen, the whole Jewish community burned themselves in their synagogue; and mothers were seen throwing their own children on the pile, to prevent their being baptized, and then precipitating themselves into the flames." If ever there were the marks of deliberation and sanity attendant upon suicide, these cases present them.

Hegesias, a Stoic philosopher of the time of the Ptolemies, gained the title of "The Orator of Death," from the eloquence with which he preached contempt of life and the blessings of death. "So intense," says Lecky, "was the fascination he cast around the tomb, that his disciples embraced with rapture the conse-

quences of his doctrine; multitudes freed themselves by suicide from the troubles of the world." The fashion at last attained so perilous an extension that Ptolemy had to banish the philosopher from Alexandria.

Among the examples given by Dr. Winslow, in his "Anatomy of Suicide," and Esquirol, in his essay on suicide in the "Dictionnaire des Sciences Medicales," are some which most conclusively show that while an individual may be prompted by a mesmeric sensitiveness, or other cause, to fall in with an epidemic of suicide, yet the act is wholly controllable. For instance, "The ladies of Miletus committed suicide in great numbers, because their husbands and lovers were detained by the wars." At one time there was an epidemic of drowning among the women of Lyons. They could assign no cause for this singular tendency; it was checked by the order that all who drowned themselves should be publicly exposed in the market-place. That at Miletus was stopped by a similar device. The ladies generally hung themselves, and the magistrates ordered that in every future case the body should be dragged naked through the town by the ropes employed for the purpose. *There were no more suicides*; the apprehensions of an outraged modesty were quite sufficient to check the suicidal epidemic, thus proving that it had been a mere stupid fashion, all the time controllable.

In the Vedas, the scriptures of the Brahminic religion, the act is not mentioned, but for ages it has received a distinct ecclesiastical indorsement in the approval of suttee, or widow-burning, and the blessings bestowed by the Brahmins upon those who have taken their own lives in what they regard as a good cause.

"If we wish to understand the religions of the ancient nations of the world," says Prof. Max Muller: "We must take into account their national character." He continues:

Nations who value life so little as the Hindoos and some of the American and Malay nations, could not feel the same horror of human sacrifices, for instance, which would be felt by a Jew; and the voluntary death of the widow would inspire her nearest relations with no other feeling than that of compassion and regret at seeing a young bride follow her husband into a distant land. She herself would feel that, in following her husband into death, she was only doing what every other widow would do; she was only doing her duty.

In India, where men in the prime of life throw themselves under the car of Juggernaut to be crushed to death by the idol they believe in; where the plaintiff who can not get redress, starves himself to death at the door of his judge; where the philosopher who thinks he has learned all which this world can teach him, and who longs for absorption into the Deity, quietly steps into the Ganges; in such a country, however much we may condemn these practices, we must be on our guard, and not judge the strange religions of such strange creatures according to our own more sober code of morality.

Let a man once be impressed with a belief that this life is but a prison, and that he has but to break through its wall in order to breathe the fresh and pure air of a higher life; let him once consider it cowardice to shrink from this act, and a proof of courage and of a firm faith in God to rush back to that eternal source whence he came; and let those views be countenanced by a whole nation, sanctioned by priests and hallowed by poets, and however we may blame and loathe the custom of * * religious suicides, we shall be bound to confess that to such a man, and to whole nations of such men, the most cruel rites will have a very different meaning from what they would have to us. * * * * * They contain a religious element, and presuppose a belief in immortality, and an indifference with regard to worldly pleasures, which, if directed in a different channel, might produce martyrs and heroes.

Thus, this master scholar shows us that not merely is suicide among the Orientals no evidence of insanity, but it is not even a crime.

Goethe, in his autobiography, says:

Suicide is an event in nature which, however much it may have been spoken and treated of, must still excite the interest of man-

kind, and be re-discussed by every generation. Montesquieu assigns his heroes and great men the right to give themselves up to death whenever it may please them; for he says they certainly must have the right to close the fifth act of their tragedies at what point they please. However, the question is not now of such as have led an important life, have given up their days to serve an empire or the pursuit of freedom, and whom surely we can not blame if, when the idea that animates them disappears from the earth, they follow it into the hereafter, hoping to pursue it there. We have to do with such as, from dearth of action in the most peaceful condition in the world, through immoderate demands upon themselves, become offended with life. As this was my own condition, and I well know the pain I suffered, what effort it cost me to escape it, I will not hide my reflections on the various methods of self-destruction that one could choose from.

It is something so unnatural that man should tear himself from himself—not only injure, but annihilate himself—that he resorts usually to mechanical means wherewith to execute his design. When Ajax falls upon his sword, it is the weight of his body that renders him this last service. When the warrior binds his shield-bearer not to allow him to fall into the hands of the enemy, it is also an outward power of which he assures himself, only moral instead of physical.

Voltaire relates the following incident:

Some years ago, an Englishman, named Bacon Morris, a half-pay officer, and a man of much intellect, came to see me in Paris. He was afflicted with a cruel malady, the cure of which he could scarcely hope for. After a certain number of visits, he one day came to me with a purse and a couple of papers in his hand. "One of these papers," says he to me, "contains my will, the other my epitaph; and this bag of money is intended to defray the expenses of my funeral. I am resolved to try for fifteen days what can be effected by the regimen and the remedies prescribed in order to render life less insupportable, and if I succeed not, I am determined to kill myself. You will bury me in what manner you please; my epitaph is short." He made me read it, and it consisted only of the following two words from Petronius: "*Valete Curæ*;" "Farewell, Care!"

To gather a few illustrations from the domain of romance, it may be remarked that the "melancholy

Dane," although of doubtful sanity on other points, discussed the question "To be or not to be," with mental soundness, and a clear apprehension of the subject; Romeo and Juliet deliberately and intelligently preferred death to earthly separation; and the historic ballad of "Villikens and his Dinah," which narrates how by "pizon" they died, makes no attempt to cast the charitable mantle of impaired intellect over the extremely logical young lady who chose death rather than a distasteful husband, or of her Villikens who "laid down by her side," who "drank that cold pizon and immejitly died."

My experience for the past five years in the investigation of cases of suicide has forced upon my mind the conclusion that but a comparatively small number of suicides, even in this country, is attributable to insanity.

While it may not be proper to say that suicide, like the small-pox or yellow-fever, is a disease, nor that it is contagious, yet there are times and states, so to speak, of the social atmosphere when the propensity seems to prevail to a most alarming extent—when man's attachment to life ceases, when shadows seem to pass over the bright side of his existence, when hopes of happiness or fortune are blighted, when misfortunes seem to multiply and become insurmountable, when life seems to have proved a total failure, when pride and ambition have been blasted, it is then the wicked thought enters the mind that death is preferable to such a life, and the sad result, deliberately, intelligently and ingeniously planned, follows. It is not insanity, but a deliberate purpose to escape ills which to the suicide seem overwhelming, and which he has not the fortitude to bear.

I have in my mind several practical illustrations to sustain this theory coming under my personal observation.

During the last year, a man of intelligence and culture, of mature years, with a wife and four children, to whom he was fondly attached, had the misfortune to get into financial difficulties, and saw bankruptcy and poverty staring him in the face, and the hand of want outstretched and ready to grasp the delicate form of a beloved companion and the tender pledges of their mutual love, and for them, and to drive the wolf from their door, he deliberately and intelligently laid his plans to protect them by the sacrifice of his own life. As he did not succeed, however, in his felonious attempt, but "still lives," I will not mention his name or place of residence. His family being absent for a few days, leaving only a woman servant in the house, he seized upon that occasion for the enactment of the tragedy. He was found in the morning by the servant in a comatose and unconscious state, in bed, with the covering drawn over his head and a rubber bag containing a sponge saturated with chloroform near his nose and mouth. Medical aid was immediately called, and, after several hours of active treatment, consciousness was restored. It was then given out, as indicated by him, that the house had been entered by burglars for the purpose of robbery, and the victim drugged by chloroform. The theory advanced at the time, and acted upon by the police for a while, was that the robbers entered by a small closet window, which was found to be open, and made their exit by a door, the bolt of which was discovered to have been thrown back; that they had been alarmed by the brilliant light of a fire raging the night before not far distant, and escaped with a portion of their booty, which consisted of a little silver-ware and an article or two of jewelry, which were subsequently found in a drawer hid in a bush near the house, directly in line with the

fire referred to, and covered by a cloth. The drawer had been taken from the buffet which had contained the silver. It was found by a small child of the victim a few days after the supposed robbery. This was a very plausible theory, and ought to have satisfied a reasonable public and secured to the unfortunate victim the sympathy of his neighbors. But this is a very wicked world, and there is always a disposition when theories are put forth, however plausible on their face, to criticise, investigate, and test them. So in this case and in this neighborhood there were doubting Thomases, who would insist upon thrusting their probes into this theory. It was suggested :

1st. If the thieves were frightened by the light, it would have been very stupid in them to have run directly towards it to deposit their booty.

2d. Whether a burglar was ever known, when stealing silver from a buffet, to take the drawer containing it and cover it with a cloth, instead of wrapping the silver in the cloth, so as to convey it without noise ?

3d. Why they should take a single coat of the victim to cover the drawer, without disturbing any of his other garments ?

4th. Why the pocket-book of the victim, which was upon the mantel in his room, was undisturbed ?

5th. Why his wife's wardrobe, which consisted of costly silks and laces, in a closet in the same room remained untouched ?

6th. Why the servant, who slept in a room on the opposite side of the hall, was unmolested ?

7th. Worst of all, how it happened that the rubber bag, which was afterwards positively and emphatically identified, and found to have been purchased by the victim himself shortly prior, could have been used for the nefarious purpose by the burglars ?

8th. How it happened that the victim was found by the disagreeable doctors to be under the influence of morphine as well as chloroform ? and

9th, and last, whether a man retiring in conscious sanity can be chloroformed without being awakened in the process.

I will not say how much force there is in this last suggestion. That is rather a conundrum of the doctors for the doctors. It is enough to say, the man is sound and sane; the police were called off, and no trace of the burglars could be discovered; but it was found that his life was insured to the amount of some \$50,000, and that most of his policies were of recent date.

With a little more morphine or a little more chloroform here would have been another case for a coroner's verdict of suicide while laboring under "temporary aberration of mind," and a chance for an intelligent jury, actuated perhaps by the purest sympathy, but under the erroneous belief that the man must have been insane or he would not have committed suicide, to have put their hands on several bloated corporations, and to have vindicated the claims of the widow and orphans; in other words, by sympathy and error to have robbed innocent policy-holders and rewarded rascality.

A very striking case also occurred in Connecticut in the summer of 1872. It was pretty thoroughly discussed in the Connecticut papers at the time, and the facts disclosed in its investigation were peculiarly interesting. I refer to the case of Captain George M. Colvocoresses. He was a Greek by birth. Having lost his parents in the Greek revolution, he was picked up as a waif by one of our naval officers, brought to this country and educated in the naval service, remaining in that service for many years. At this time, however, he had been relieved for reasons which it is not necessary to explain, and was residing at Litchfield, in the State of Connecticut.

In January, 1872, a life-insurance agent got information that Captain Colvocoresses was desirous of securing a large line of insurance on his life, and it was not

long, therefore, before the agent put himself in communication with his customer. The reason given by the Captain to the agent for wishing to secure a large insurance, was that he had a suit against the Department at Washington for a large amount of prize money, something over a hundred thousand dollars, and as he might lose the suit, he had made up his mind to place as much insurance upon his life as the amount involved in the suit. He did not care to have the policies issued before the middle of January, and in all cases wanted to have the premiums made payable semi-annually. Through this energetic agent, and by his own efforts and applications, he secured, in twenty different companies, an insurance upon his life amounting in the aggregate to \$195,500.

This was the first act in the drama. The next was to die before a second premium became due. He had exhausted his resources, and, of course, the speculation would fail unless the second act was performed in time. He occupied a high social position. His resources had mainly melted away in bad investments, and the ladder which had kept him and his family well up was in danger of being swept away. There was no avoiding a sacrifice, and the chivalry of race and profession secured the victim. On Wednesday, the 29th of May, 1872, he left his house in Litchfield, saying that he was going to New York, taking with him a russet leather valise, a small black satchel, an umbrella, and a bamboo sword-cane. His scheme was to be apparently murdered, and this was his outfit. Instead of going to New York, he stopped at Bridgeport, where the *dénouement* was to occur. For some weeks he had been on the go, like the Wandering Jew, up and down the earth to find the time, place, and occasion, hesitating, doubtless fearing; but finally the act must be performed without farther delay, and Bridgeport was the chosen spot.

His part had been thoroughly studied. He feared that suicide would void his policies, for his attention had been called to that subject by the trial of a case involving the question whether death was the result of suicide or murder, and which he had watched with intense interest. He stayed some days in Bridgeport, and finally took passage on the boat for New York, engaged his state-room, and deposited in it the russet bag, and then left the boat with the sword-cane and black bag in his possession. He went to the hotel with these articles about 9.30 in the evening. He remained about the hotel till just half-past ten o'clock. The boat was to sail at eleven o'clock. He started apparently for the boat, stopped at a drug store and got a couple of sheets of paper, and inquired the best route to the boat. He was seen to turn into Clinton street, a narrow street, about twenty-five minutes to eleven. At eleven a pistol shot was heard in the street, where his body was immediately found. It appears that, after leaving the drug store, he had taken the black bag to a spot near the dock, cut it open with his knife, which was afterwards discovered, taken out his pistol, which was an old heavy one, out of date and rusty, gone back to Clinton street, bent his sword-cane nearly double over a picket fence, unbuttoned his coat and vest, placed the pistol against his breast with one hand, and fired while he held open his coat and vest with the other—the blaze setting fire to his shirt, by the light of which he was speedily discovered. There was no evidence of any struggle, and the report of the pistol instantly brought several persons to the windows overlooking the street, and no one but himself was in the street at the time. The noise made by bending the sword-cane was distinctly heard by a neighbor. I will not take your time by going more minutely into the many inter-

esting details, but it is enough to say that the surrounding facts and circumstances left no doubt upon the mind of any intelligent, disinterested man that the theory of murder was a humbug, nor that it was anything but a case of deliberate suicide by a sane man; yet such is the state of public feeling upon the question of suicide, that the insurance companies were afraid to trust it to the decision of a jury, and rather than run the risk of losing the whole amount of this fraudulent insurance, they compromised by the payment of about one-half of the claim.

With a healthy and intelligent public opinion no such fraud could be consummated, nor outrage perpetrated. You will excuse me for speaking strongly on this subject. In my judgment this demoralization of public sentiment is a disgrace to our civilization. While the sentiment which moves us to protect the weak against the strong is worthy of the highest commendation, a feeling that ennobles human nature when intelligently exercised, I have no sympathy with its abuse and perversion, nor should it be permitted, at this day and age, to encourage the perpetration of crimes or legalize frauds.

Although I am drawing largely upon your patience, I will take the liberty of referring to one other case among very many at my command, which I think strikingly illustrates the question we are considering.

Monroe Snyder, a Moravian, residing at Bethlehem, Pa., was a man of the age of fifty-four. He had been well off, was unfortunate in his slate mining operations, and became largely involved in debt. He was an uneducated man, but possessed of strong, vigorous common sense, and was devotedly attached to his wife and an only son. He seemed to have a mortal dread of not being able to pay his debts, or that those who had

trusted him should ever be in a position to say they had lost money by him. He clearly saw the approaching crisis in his affairs, growing out of his financial embarrassment, that dishonor would soon come upon his good name among his neighbors, and he could devise but one way of escape, and that was through life-insurance.

If you will bear with me, I will read from his letter of instruction to his son, which was written by him at three several sittings, but completed only a day or two before his death. This letter unfolds his plan completely, and will give you a better idea of it than I can convey by stating it in other language.

TO MY DEAR AND MUCH BELOVED SON LEWIS.

Lewis, sometimes I feel, and it appears to me that I want to be here, with you and Mother, on this world, long, any more, but we dont know what God will let happen with us; but we have to submit. I dont hope to get killed or die soon; but sometimes, I feel and think that I would not be in this world long any more, Lewis, if God calls me home, or away from you and Mother, you must do the best you can. first of all, be kind to mother, whatever you do, and see that she is well cared for. Lewis, I have more Debts than you know, or that you think; but I cant help it; you know that I always tried to do the best I could, but oftentimes, when I thought I could make something, I lost. I often thought I would tell you more about my circumstances, than I did, but when I meant to tell you, I could not do it, and if I would, it would not made it any better. if I could turn things into money, what I would like to sell, I could shift it round; but there is no sale for nothing at present. Lewis, I have my life insured for Sixty-five Thousand Dollars, altogether. for 20 Thousand in the Penn Mutual Life insurance Company of Philadelphia, and for 30 Thousand Dollars in the Mutual life insurance Company of New York; and for 10 Thousand Dollars I have an accidental Policy in the Hartford Company of Connecticut; and 5 Thousand in the Mutual Protection life insurance Company of Philadelphia; which is for the benefit of mother. 5 Thousand in the Penn Mutual is for mother; and 10 Thousand in the Mutual Life of New York is for mother. All my other insurance is for your benefit, if any-

thing should happen with me, Lewis, get the money out of the insurance Companys, for they have to pay it. the Agents of the Companys I insured in, will assist you, and pay all my debts, for I borrowed some money to pay the premiums on the insurance, so that my Creditors could perhaps get a hold of the insurance, and if they could not, pay all my debts, and be a man, so that nobody can say, that they lost money on your Father. You can pay all my debts, and hold all the property, if you get the money out of the insurance Companys, and have money left. I insured to much; it costs to much money to keep it up, or to pay the premiums; but, I am in now, I will keep it up, if I can. Lewis keep out of these Companys, for it is worth nothing to be in these large Companys and be very careful that you dont get Cheated so so much, and dont let people talk you into all these things or into anything. Lewis, dont show this paper to any boby whatever you do, dont let any person see it; Keep it entirely a secret, if anything should happen with me, sell my interest it all these Iron mine or ore Leases, it is to expensive and very risky Business, and dont listen to what other people tell you, and tend well to your store. The insurance Company's must pay the insurance, what I am insured. they can't get out of, if, I am gone once, dont let peeple know for how much I am insured, or how much I am in debt. Keep it as much secret as you can, for not everybody need to know, for it want make it any better, but when you get the money out of the insurance Companys, if it ever should happen so, dont think you would keep the money and not pay the Debts for that purpose I insured so much that all my debts can be paid if anything should happen. you can pay the Debts, and have some money left, and keep all the property what we have, if you manage it right. the Agents of the Companys will assist you in taking the affidavits for Proof of Death, and so on. Lewis you will find my last will and Testament, in the safe in a sealed envelope, Lewis dont do as I have done, dont let people talk you into anything, to go security, or endorse notes to the Banks and sorts of such things; be very careful about such things, and dont do as I have done. I done a great deal to much of such things. Lewis, keep that safe, and the gold and silver money what is in the safe, keep that without fail, and keep all the property for the present time, if I should be called off; for in course of time the property here will bring a good price. I made you my executor in my will, if anything hapens with me you must take my will to Easton to the Registers office, inside of Thirty days of my death, and take out your papers

as executor of my estate; the man that signed the will, as witnesses, you must take to Easton to testify to the will; you dont need to give security as Executor, you can take an inventory, or an appraisement of my things and before you have to keep a sale, you can see wether you get the money of the Insurance Companys or not.

(Signed) MONROE SNYDER.

Lewis, I dont hope or expect to die soon, or get killed; but god only knows; we cant tell. life is uncertain, but Death is certain. About keeping Llewellyms insurance Policy up, if he lives longer than I, you can do as you please, or as you think best, try and keep everything as it is, and as quiet as possible; it is of no use to let every body know how things are; I know if something should happen with me, mother would trouble herself a great deal about it; if it should be the case take good care of her whatever you do.

Lewis I think I told you, that the Penn Mutual life insurance Company holds a Mortgage of five Thousand dollars on our house, for which they hold one of my insurance polycys of five Thousand Dollars, as colateral security, I have a paper in the safe that shows it, and the receipts that I paid the premiums on it. they also hold a fire insurance Policy, as colateral security, which is transfered to them. you mast see that it comes all right. Jonas Snyder holds the fire insurance Policy on the Drug Store Building as colateral security for Mr. Taylors mortgage, that Policy is not transferred. I have a receipt in the Safe from Jonas Snyder. Lawyer Stout, at Easton, is the agent for the fire insurance Company; where the Drug Store property is insured in.

Mrs. Reeder at Easton, holds the insurance Policy on your stock, as Colateral security, for the Thousand Dollars, what Shoemaker had loaned of her, Lawyer Reeder attends to her business, so that you can find everything, and try and straighten it up, for Gods sake.

(Signed) MONROE SNYDER.

Lewis, I think it would be best, if something should happen with me, if you would get every thing appraised and sell it. Mother can take, at the appraisement, what she wants; and any thing of the personally property you want, you can buy; but the houses or Real estate, you cant by, because you are my Executor; you cant give a Deed to yourself, but Mother can buy the Real

estate, or get a good friend to buy it for her, and she can take the deeds, and afterwards give you another Deed. I think that would be the best way, and about Grand Mother Beils Estate, see that it comes all right, so that Daniel and Reigel, who are my security, need not to pay anything for me. the best way I think is to sell every thing after I am gone, as soon as you get the money out of the Insurance Companys for that matter about the St Nicholas Slate Company and others might make you trouble, where I am security, if the property is not sold. if you sell the property for cash it wont come so high and if you have the money of the Insurance Companys for my insurance that would be the best way. anything of the personal property you can take, by the appraisement, or buy it; you and Mother can keep all the personal property; keep by the appraisement or buy it; dont let the Safe go to Strangers; keep that, and keep the silver and gold money, what is in it; if you dont keep the other money, if there is any, the silver and gold. dont say anything to nobody; that is some of Grandpaps yet, and William and Amanda had some when they died; that is in the safe yet, and yours to, what you have for a good many years. Keep all that, and dont let Mother give all her money, if I am gone, so that she has something to live. if the insurance is all paid, you can get along right well, and I cant see no reason why they want be paid; for the premium is all paid; on the Polieys, and the Companys are all good Companys. Do the best you can, but never go security for nobody, nor never endorse a note, for no man, no matter who he is, if you manage right, you can get along, without asking any body to go secutity for you, or to endorse for you, dont give up Shoemakers Slate Stock Certificates, what I hold, as Collateral Security, until he has settled all his notes, what I have endorsed for him. This Guardian thing you also must settle. Charles things are all settled, but Owen Beils child, I am Guardian for, and for Lewis Berkenstoeds two little girls. if I am not here any more they will get other Guardians, but dont go Guardian for nobody; it only makes trouble. but see that these things all come right, the books and papers about this Guardian business are all in the safe; they show everything how it is. Lewis you know how it is with the wagens; that one of them belongs to you, which one you want, and the Sleigh, wolf Robe, and Blanket, and Bells are also yours. it was bought for you, and you must keep it. if Henry Beil ever asks you to take that Slate Stock back, what he got of me dont you do it, or pay him any money; dont give him a cent, for he cant make you do it;

perhaps he will never ask you; I dont know as he will; he never asked me to take it back; if he would or ever will, I want do it; only see that Grandmother Beils estate is settled up right, so that they cant say that they did not get their money, and if the securitys had to pay anything, I think Daniel is pretty severe, if he gets mad once at anybody. mother's money you must take care what she gets out of the insurance Companys for she cant. you must see too, that you will also find, a receipt for your Stock in the Drug Store, so that you can hold that; perhaps my creditors might try to get a hold of it, but I dont see how they can, if you have this receipt; that shows that you paid me for it; if anything happens with me, settle every thing up, all right, and as soon as you can; and as quiet as you can; the sooner, the better; if you sell the houses, let mother by them, or get a good friend to buy them for, and she can take the deed, and give you a deed, again; I think Henry Beil would be a good man to buy the houses for mother; you cant trust anybody, particular no stranger; perhaps, if you would get Hess to buy it, he would not let you have the half, any; if you sell the houses, for cash, or a short credit, they want come so high, and you can do that, because, you get the money out of the insurance Companys. if Mother ever gets money of the insurance Companys, if she live longer than I do, you must take care of it, for she cant, and dont let her lend out, unless you see it. if you put it in a good national Bank, I think that is the safest or take the first mortgage on Real estate. Whatever you do, dont let people be lei you, or lei you in things as they did me; and stay out of these Companys; never go in a Company of no kind, for it is worth nothing to be in these Companys. but you are old enough to look a little ahed, and dont spend much money on them Iren ore leases; if you can get a little something for them, sell and if no let them run out, and dont spend much money on them; for it is very risky Business; lottery Business, as Mr. Jacob Hiestand said. Lewis, I settled up everything with Lyn; he is to pay everything we owe over in Jersey.* So now Lewis, keep out of these things as I told you often, because it is worth nothing; this mining is very Risky Business; dont spend any money on them Leases what I hold, if you can get anything for them sell them; if not let them run out; * * * if anything should happen with me, which I hope it want, but we

* He here expresses an opinion of certain men, which has no connection with the question at issue.

dont know, for life is uncertain, but death is certain, Lynn must pay everything what owe in Jersey, for Lumber and work and for hauling the ore, and Klines Royalty and Klines Timber, and everything, before he can get them notes, what he left me as colateral security; I also gave him that Lease there at Klines, what I had on Henry R. Keutz land otherwise I could not settle with him.

(Signed)

MONROE SNYDER.

I think you will agree with me that this letter is not the product of an insane man. Its orthography and grammar may be defective, but every line of it proves that the writer's head was level.

He has now obtained the \$65,000 insurance; has borrowed some of the money to pay the first premium. This money, if realized, will lift his debts and provide for his wife and son. Unless it can be realized before the next premium matures, all is lost. The last act must, therefore, be performed. The plan in this case also was to have a murder perpetrated, but as in the Colvocoresses case, the bungling manner of the attempt made the theory of murder ridiculous. I will not inflict upon you the details of the efforts of Snyder at self-destruction, but a plainer case of deliberate, intelligent, determined suicide was never presented to a court or jury, and yet it was found impossible to overcome the settled conviction that there could be no suicide without insanity, and consequently the fruit of this barefaced swindle has been gathered. I think it must be evident to every intelligent thinking man that there is something radically wrong in a system of jurisprudence which permits or tolerates such grave abuses, and that it is important to the welfare of society, and that justice demands we should have more intelligence in the jury-box, and more firmness on the bench to insure protection.

The importance of the question is becoming more and more manifest. The suicidal mania is spreading beyond all precedent, and it becomes the duty of the moralist, the philanthropist, and the statesman to study the subject. The barriers to self-destruction seem to be giving way. The great protection in a society like ours, with its high elevations and deep depressions, has been in the profound religious conviction of our people that suicide is a pronounced sin, abhorrent to Christianity and severely denounced in the Word of God. In this age of free-thinking scientific investigation and universal criticism, one by one the great truths contained in the Bible, the corner-stone of our religious system, are assailed or doubted, and the faith which has been handed down from generation to generation questioned. The consequences are inevitable. Destroy the faith of men in the Bible and the great truths it teaches, remove the restraints of religion and teach annihilation, and you will reap without the aid of insanity a harvest of suicides that will astonish the world.

CASE OF EDMOND J. HOPPIN. HOMICIDE. PLEA, INSANITY.

BY CARLOS F. MAC DONALD, M. D.,

Superintendent of the State Asylum for Insane Criminals, Auburn, N. Y.

At a Court of Oyer and Terminer, held in January, 1878, in the County of Cayuga, State of New York, Hon. Chas. C. Dwight, Justice, presiding, Edmond J. Hoppin, a man twenty-six years of age, single, was tried on an indictment for murder, in causing the death of Philip H. Proudfit, in July, 1877.

This was the last of a series of eight murder trials which had occurred in the county, in rapid succession, all within a period of two years; and five of them within three months—and this was the third of the series in which the plea of insanity was interposed as a defense. The following extract taken from one of the daily newspapers at the time of the trial, will serve to indicate the extent to which public attention was drawn to the case.

The published announcement that the trial of Hoppin would open before Judge Dwight this morning, had the effect of filling the court room to its full capacity.

It must be remembered that in all the murder trials in Cayuga recently, the accused has invariably been a hardened wretch, in whose fate the people took no sort of interest whatever. In this case it is entirely different. Hoppin comes of good family and most respectable antecedents; he had always led a quiet, honest and unassuming life up to the time of the perpetration of the crime, when he suddenly became notorious, and, from the causes which led to that crime, in some sense a hero.

During the progress of the trial, it was evident that the sympathies of the community were with the pris-

oner, partly on account of his excellent character prior to the homicide, but largely because his unfortunate situation was regarded as the result of a combination of melancholy circumstances, which led to the fatal affray that resulted in unintentional homicide.

The tragedy occurred in the little hamlet of Sterling Valley, situated in the northern part of Cayuga County, N. Y., on the evening of July 13th, 1877. The deceased was unmarried, twenty-nine years of age, and a son of the late Dr. Alexander Proudfit, who was tolerably well known throughout the State, the family name being reputed as one of the oldest and most aristocratic in the Lake country. Edmond J. Hoppin, the prisoner, is the youngest son of a respectable, well-to-do farmer, residing in the same township.

It appears, that about three years ago, young Proudfit began paying his addresses to Hoppin's youngest sister, who was then about twenty years of age, comely in appearance, and of chaste repute. The friendship of this young couple soon ripened into intimacy, and it was thought they were to be married. Under the sacred promise of marriage the pseudo-lover accomplished the young girl's seduction, and then, in order to evade the result, procured medicines which he persuaded her to take for the purpose of producing a miscarriage; failing in this, and realizing that her condition could no longer remain a secret, he fled from the vicinity, in order to escape the inevitable consequences of his perfidy. When Miss Hoppin found that the author of her ruin had abandoned her, she became desperate, through shame and fear of exposure, and attempted suicide by poisoning, but was discovered in time to prevent a fatal termination. While suffering from the effects of the poison, her condition became known to her mother, who at once communicated the fact to the

rest of the family, including the prisoner, who, at first, refused to believe it. His doubts, however, were speedily removed by the discovery of the following letter, written by her just before taking the dose which she hoped and expected would end her earthly troubles.

DEAR PARENTS, BROTHERS AND SISTERS:

Forgive me, but I have committed a great crime and care not to live; I haven't spent a happy day or moment for a number of months; I have tried to act natural, but found no pleasure anywhere; there is one person who might have saved me from this; but he thought I was trying to deceive him. He knows why I die; God alone knows what I have suffered; oh, death is the only relief; you are all very dear to me, and it is hard to leave you, but it is best. I once enjoyed religion; oh, that I had continued to serve God, I would not have been where I am now; oh, if I was the girl I was when I went to the Valley; I had always said I would never cause you any trouble; but I have fallen, and am forever ruined. I hope you will all meet in heaven, I trust you will, but I shall never go there. Think of me as lost; I might have been a christian now. The Bible says, the vilest sinner may return, but it is better that I die than live as I am; you will soon forget and it is better that you should; tears prevent my writing and I bid you

Farewell Forever,

LINA.

My young friends will think I have done them great injustice in accepting their invitation, but I knew it was the last time, and I tried to forget the troubled future in so doing.

Hoppin, believing the story of his sister, that it was only by the most seductive wiles and solemn matrimonial promises of Proudfit that she placed her honor in his keeping, was naturally overwhelmed by this sudden and terrible family affliction. Following this unfortunate event, his aged mother declined steadily in health, and died, it was said, "of grief," only a short time previous to the homicide. Young Proudfit remained absent nearly two years, returning to Sterling a few days subsequent to the death of Mrs. Hoppin.

Hoppin was employed in the store of J. C. Hunter & Co., in the village. The post office is in the store, and Hoppin also attended to that. He was in charge of the establishment, and alone, on the evening of the tragedy, when Proudfit, whom Hoppin had not met since his return, came in and, unhesitatingly walking up to where Hoppin stood, asked him to get Dr. Hugh Proudfit's mail. (Dr. Hugh Proudfit was an uncle of Philip's, at whose residence the latter was staying.) Young Hoppin handed over the mail and, as he did so, Proudfit addressed him in a sneering manner regarding the down-fall of his sister, saying, "Yov've lived through it, haven't you?" Overcome with intense anger, Hoppin seized a heavy base-ball club which stood by the counter, and felled his tantilizer to the floor, by a single blow upon the head; he then cast the club aside and grasping Proudfit by the wrists, stood astride of his prostrate form to prevent his returning the blow. A man who entered the store just in time to witness the assault, rushed forward and seized hold of Hoppin who exclaimed, "Don't let him strike me." Hoppin then started to go out of the back door, where he met James C. Hunter, to whom he exclaimed, "I couldn't help it Jim, he killed my mother." Proudfit made no attempt to return the attack, but got up, and, *without assistance*, walked to his uncle's house, about thirty rods distant. His mind was clear so that he conversed freely regarding the encounter, while his head was being dressed. During the night he was slightly delirious, but slept a portion of the time. On the following day, his attending physician, his uncle, declared that the injury was not serious, but that he would have "a very sore head." Later in the day, however, he became unconscious, and died in convulsions early on Sunday morning—about thirty-six hours after receiving the injury.

An autopsy, held several hours after death, revealed an extensive extravasation of blood, between the dura-mater and the skull, extending downwards from the point (middle of left coronal suture) where the blow was received, "nearly to the base of the brain," and, spreading out laterally, covering that portion of the anterior lobes, lying directly underneath the frontal eminences of the skull. The examination terminated upon the discovery of the coagulum, which, judging from its location, in connection with the point upon the external surface of the skull, where the blow fell, leaves scarcely any doubt that the force of the blow caused a rupture of one or more of the smaller vessels of the anterior branch of the middle meningeal artery. The very superficial character of the autopsy is a matter of great regret, especially as one of the two issues made by the defense was, that death was not the result of the blow, the prisoner's counsel alleging that the vessels were ruptured, "if at all," by the strain incident to vomiting caused by the exhibition of large doses (twelve grains every four hours) of calomel. If the coroner had taken the precaution to open the membranes and examine the brain itself, and also, to carefully inspect the base of the skull, it is possible, if not probable, that he might have discovered conditions which would have established the cause of death beyond the possibility of a doubt.

As this branch of the case may not be referred to again, it may be stated in this connection that the writer was not a witness upon this point, he having declined, for obvious reasons, to testify as an expert respecting questions that properly fall within the domain of surgery.

Hoppin made no attempt to escape after his attack upon Proudfit, but was under arrest "for assault," and

in the custody of a constable when the surprising intelligence of Proudfit's death was conveyed to him by an officer who served a second warrant upon him. After the coroner's inquest he was lodged in jail, at Auburn, where he remained, without special event, until his trial took place in January last.

The defense, as already indicated, involved two issues: 1. That the blow was not the cause of death. 2. That the accused was not responsible for his acts at the time the blow was struck. Medical and lay witnesses were called on both sides, to testify regarding the first issue, but the testimony was somewhat conflicting, and it is very doubtful if the point in question was definitely settled to the satisfaction of the jury.

The medical witnesses called as experts upon the question of the prisoner's mental condition, were, by the prosecution, Dr. John B. Chapin, Superintendent of the Willard Asylum, and by the defense, Dr. Theo. Dimon, of Auburn, and the writer.

Testimony was introduced tending to show that the prisoner was predisposed to insanity, or other nervous disease, by reason of an inherited taint descended from his paternal grandfather, who, it was alleged, was deranged late in life, and also from his mother, who died hemiplegic. It was proved that an older sister of the prisoner was once "a raving maniac and continued in this condition about a year;" also that his paternal uncle and a cousin were insane. A vast amount of testimony, covering all the circumstances of his sister's downfall, and the effect of that unhappy event upon the entire family, was presented by the defense and admitted by the court, on the ground that it was material, as tending to show the result of this great affliction upon the mind of the prisoner. The prosecution introduced witnesses to show that the prisoner was

actuated by a strong motive of revenge, and that he had made threats of violence toward the deceased, which threats, it was alleged, indicated that the act was premeditated.

The following is the testimony offered on both sides:

B. F. COOPER, called for the people:

I was in the store about three P. M., of the 13th of July last, and as I stepped in I saw Proudfit taking a paper from the delivery and pass towards the door, Hoppin walking along the same way nearly even with Proudfit, till he came to an opening in the counter, when he came out and struck Proudfit with a club which felled him; Hoppin then sprang on to Proudfit, and I grasped him, but he twice got away from me; as I grasped him the second time I called for Mr. Hunter to help me; Hoppin had hold of Proudfit holding him down; as I called on Hunter, Hoppin said, "Don't let him strike me," and he came back over against me, pushing me over, and then he went out of the back door; Hoppin met Hunter out there and said to him, "I could not help it Jim, he killed my mother." [The prisoner wept at these words.] Hunter, when I called him, was near the barn some five or six rods away. Proudfit rose up himself without assistance. Hunter told him (Proudfit) that he ought not to come in there. Proudfit replied that he had a right to come after his mail: Dr. Proudfit told Hoppin he would have him arrested; Proudfit then went to the Doctor's office with the Doctor, walking without assistance, to have his wound dressed; I went to the office with them, going in a minute or so after them. Two or three days before the affray in the store, I had a talk with Hoppin in the store. He said to me, "a black hearted villain, he would see his heart cut in pieces and strung up;" he said he would not do it, but he could see it done; I told him I did not want to hear him talk so; we were sitting on the counter; he said I did not know how to sympathize with him; some ladies came in then and he waited on them and I went away. Q. Did he say who it was, when speaking so? Ans. There were no names spoken by either of us.

HIRAM SMITH testified:

I live at Sterling Valley and know Hoppin and knew Proudfit; Hoppin said to me on the 11th of July at Hunter's store, we sitting on the stoop, and Philip had just left us, "that black son of a bitch," and soon repeated it and that he would like to see his heart's blood running down the street, and that he would like to tear it out, but he knew it was wrong; that he, Philip, had destroyed the peace of their family. Again, in the same place after the affray, he said Philip came into the store and "called me Ed. just as though I was a friend to him and I could not stand it."

Cross-examination. I lived in Sennett and went by the name of Charles Cook; I was called Hiram Smith, Charles Cook and Jerrad Cook all my life since I can remember; I made no reply to Hoppin when he made those remarks; he appeared considerably excited; I did not speak to him; I have

repeated these words before, once at the inquest and once at Sterling Valley; I saw Hoppin before this that day in the store; the store door was open, and I was some four feet from the door, I had talked about five minutes with the Proudfit's before Hoppin came out; Hoppin did not call or speak any name, but spoke excitedly; I think the last he said to me was "I s'pose you can't sympathize with me."

Re-direct. He made a gesture with his hand when he used the words, but not in the direction of Proudfit, nor did he look at Proudfit.

Dr. HUGH PROUDFIT, Sterling Valley, sworn for the people :

Am a physician; have lived twenty-eight years in Sterling; live from twenty-five to forty rods from the store; Philip was my nephew; was twenty-nine years old; I saw him when he went into the store; next I heard a tussle; Cooper was standing by the side of Phil. and Hoppin had Phil. by both wrists holding him down; only a few seconds between Philip's and Cooper's going into the store; the first thing I noticed was blood running down Phil's neck. I said "did he knock you down," he said "yes, Uncle Hugh, he knocked me down with a ball club;" Hoppin said "don't let him strike me;" the club lay on the counter on the north side of the store, on the east end of the counter, two or three feet from Hoppin; I seized the ball club and told Hoppin to let go of him; I advanced toward him with the ball club and he wrenched away from Cooper and ran to the back part of the store; Hoppin turned round just at the door and came back with Hunter; Philip was getting up at this time; then Hoppin said "Jim I couldn't help it, he killed my mother;" I said to Hoppin, "I'll have you arrested within an hour;" Hunter said to Philip: "You oughtn't to have come in here;" I said "he has a right to come in here;" on examination of Philip's wound I found a contusion extending back, parallel with the median line of the skull; could not detect any fracture of the skull; dressed it with adhesive straps; was with him about an hour; he seemed faint and sick; he lay down on the lounge and staid there till after dark, I think; I went into the store at just about three o'clock; I went back to the store to get my paper; when I got back he showed no unfavorable symptom for some time; I attended him till he died, about three o'clock Sunday morning, the fifteenth; died in my office; Alexander Proudfit was there about sundown and one of us was with him all the time; was present at the post-mortem examination, Friday evening; he grew weak; his pulse was low at about ten o'clock; was slightly delirious at times; he went to sleep about eleven o'clock; he slept quietly all night except when we roused him up to take medicine; I only slept two hours; went to bed at twelve and got up at two; on Saturday, in the morning, he seemed brighter for a spell; about eleven he roused up, and about noon he said he felt much better; shortly after that he began to get restless; Alexander went for Dr. Acker about ten or eleven o'clock; he was restless for an hour or two; Dr. Acker came between twelve and one; quietness came on then and continued till four or five o'clock; went away at three o'clock and returned at eight or nine; came back and found the patient in convulsions and stayed with him till he died; I bled him a few moments after I got back; I bled him a little over a pint till he stopped moaning and till he got easy; Dr. Acker came about noon; Philip lay at that

time quietly on the bed; Dr. Acker examined the wound and ordered cold water applications to his head; I told Dr. Acker I had given liberal doses of cathartics; these doses never operated as they ought to and we gave him injections; there had been no operation of the cathartics until after Dr. Acker left, and not until we gave injections; I ordered the injections soon after Dr. Acker left; I left again about three or four P. M., and went to Fair Haven, being gone about five hours; when I came back he was in convulsions; spinal muscles were affected, and there was contraction of the muscles of the arms; I bled him to relieve him, regarding his case as hopeless; there were no symptoms of compression of the brain until he had convulsions; he vomited a little while I was dressing his wound at first, and he vomited again before ten in the evening, but not much; liquid matter was thrown off, a little greenish in color, and in quantity about a pint; no one held his head when he vomited, he himself putting his head over the bed and vomiting into the vessel; he vomited again in the night as Alexander said; the second vomiting was only liquid tinged with green, which showed a derangement of the stomach, and a bilious condition; he had been in poor health before he came home from the west.

Dr. ACKER testified:

I am a physician residing at Hannibalville; I made an examination of Philip Proudfit, opening the wound, at about two P. M., Saturday; there was no fracture of the skull; his eyes were not very sensitive to the light; Dr. Proudfit told me how he had treated him; I suggested that there might be a fracture of the inner table of the skull; I opposed bleeding him at that time; the pupil of the left eye was a little the most dilated; he said he had made water that morning, and I tried to make an examination of the bladder but he resisted by pushing my hand away and saying "not there;" there were indications of paralysis; I suggested injections in case his bowels did not move, but did not regard their movement as material; I suggested cold water applications to his head.

Cross-examination. The post-mortem examination was over when I arrived, and I made no examination of the body, but saw a clot as shown me lying on a board; the surface of the clot was smooth, moist and glistening; my opinion is that the clot was of recent formation, or not until symptoms of extravasation began.

Re-direct. How are you able to determine the time of the formation of the clot? Ans. By the formation of the clot, particularly as to its moist appearance.

Question by the Court. Do you mean to say the clot was double?

Ans. No sir, it was drawn in a little on the sides, though not divided, but was one clot or piece.

Dr. ELDRIDGE testified:

I live in Port Byron and have been a physician and surgeon over forty-nine years; I helped make the post-mortem examination; we found a slight abrasure on the hairy part of the scalp, and found the injured part which extended near to the base of the brain; in which we found the clot as described by Dr. Acker; there was no fracture of the skull, and no compres-

sion of the brain, except from the coagulum, and this was sufficient to cause death; the clot was of the color of venous blood; the dura-mater was separated to a large extent from the skull; the greater the extent of this separation the greater would be the coagulum.

Cross-examination. Dr. McKnight and Dr. Jenkins did the manipulating at the post-mortem examination; there was no separation of the dura-mater from the skull except where the clot was formed; the wound was directly over the left eye extending over or across the suture, and nearly at right angles thereto; there was no rupture of the dura-mater; I think there was a very small abrasure of the skull about the size, perhaps, of a kernel of corn.

Dr. GEORGE MCKNIGHT testified:

Have practiced as a physician and surgeon for thirteen years in Sterling; a blow on the skull with a weapon as described by Mr. Cooper I believe would rupture the blood-vessels in that locality, though it might not have ruptured or severed all that were ruptured or severed. This question and answer were objected to by the defense, but admitted by the court.

ALEXANDER PROUDFIT testified:

I am brother of Philip Proudfit and attended him the last few hours of his life; I went to the office on Friday at about half past four and found him lying on the lounge; went away and returned at about half past five and staid with him about half an hour, went again to North Sterling and came back and staid with him all night. I was with him after this all the while except going after Dr. Acker, being absent about an hour; first saw him vomit about half past five and it lasted about half an hour, or until I went away; again about seven o'clock he vomited, and every time after this when he took drink or medicine; he tried to take food but could not; it would roll out of his mouth; I first gave him medicine about seven o'clock giving it every four hours; the night before he died, or Saturday night there was some medicine in a tea-cup which I gave him but I do not know what it was; he seemed to be in a sort of stupor from Friday night all the time, but would rouse up to answer questions and go to sleep again; I could not arouse him on Saturday afternoon at about four o'clock; but finally did after some time; he was harder to arouse till he went into spasms.

Cross-examination. I am thirty-one years old, being sixteen months older than my brother. I think the medicine in the tea-cup was to relieve his spasms. It had a reddish cast and the tea-cup was about half full. I thought it hurt him and I refused to give him any more of it or of any kind of medicine because it hurt him so to swallow. The Doctor twice prepared calomel powders for him. Some powders were left on Saturday afternoon because he could not take them, but we did give him more afterward, and after Dr. Acker had left. He vomited very bad when he lay on the lounge and after he went to bed; I did not notice any greenish color in the vomit at any time; the vomiting continued till he died, often making an effort to vomit but raising nothing; nothing that I remember was given him to prevent vomiting and he said nothing about it that I remember; he answered readily

questions asked him by Dr. Acker, and in the forenoon he rose up and sat on the side of the bed and pulled on one of his boots; I took it off and told him he must lie down; he knew me and others who came in; he was quite restless after he had spasms, but was quiet before that time; he had perspired Saturday night but not before that I noticed; there was no cooking in the house after he was struck, nor any fuss made; we ate at the neighbors during that time; the Doctor slept Friday night on a bed on the floor in an adjoining room.

The foregoing embraces the essential portion of the testimony for the people excepting what was offered in rebuttal.

The following includes the most important testimony presented by the defense, and also the testimony of Dr. Chapin, offered in rebuttal by the people.

ISAAC M. HOPPIN, father of the prisoner: * * *

I went after Ed. and his sister the night of the poisoning; they went right to the room where Lina was; I went there just after; think he was asking her her motives for the offense and what she had taken; she said two ounces of laudanum; and after a little he took the vial and tasted it and threw it away, saying that "it mustn't be seen." He was walking with Lina a good deal that night; I heard a good deal of conversation between them; Ed's. condition was characterized by redness of eyes; continuous weeping and walking to and fro in the manner described by the other witnesses; I walked with Lina some; the Doctor, Mrs. Smith, and I guess my wife did; we made strong efforts to have her vomit; finally succeeded at about ten o'clock I think; substance of conversation between Lina and Ed., was regret for what she had done, expressed on her part; she said three or four times, "Do let me lie down and die." Her condition was talked over between him and her more than between any of the others: she seemed to take the blame on herself; wouldn't have blamed me or any of us if we had turned her out of doors; think it was about four o'clock or after when I went to bed; think Ed. was up then; heard Ed. and Lina talking once after this in the parlor; the subject was her trouble; can't tell just what was said; I gave Lina's letter to Ed. to read; remember nothing said where Lina got her medicine; was at home when Lina's child was born; Ed. was there; I observed his eyes were very red; some groaning; making gestures with his hands and clasping them; heard him talk some that night; remained at home that time about two weeks before he left; he went to Oswego a short time that spring; then came back to Hunter's; he weighed now only about one hundred and forty: previously his weight had been one hundred and seventy-five or one hundred and eighty; the white of his eyes appeared red, think I had to speak several times to him on a few occasions before I could gain his attention; wife's health was good down to time of this trouble; weight one hundred and eighty; almost always did her own work; was occasionally troubled with

palpitation of the heart ; had had it for a number of years ; after the poisoning, within a year or a year and a half, her flesh wasted to one hundred and twenty-five, she died last June I think. Dr. Kyle was there, and she consulted him at different times, perhaps from one to two years before the poisoning ; think he gave her nothing ; her heart attacks were less frequent afterwards than before ; first that I saw of paralysis was a lack of use of her left hand, about the first of February, 1877 ; she was then doing her work ; next noticed the paralytic stroke in February ; from that time she had no use of her left side ; she could talk some, but her speech was thick ; Ed. was there frequently, and was very attentive and kind to her ; she said to him on one occasion, in substance, that this had been brought about by Proudfit ; she spoke of it several times after ; when these things were said to Ed., I often saw him with tearful eyes, nervous, excited more than at other times ; I had often been awakened by my wife's weeping and mourning ; told Ed. his mother was wearing away with grief ; I think the last words she said were to Ed.—“that villain that killed us all ;” she was conscious but a few hours after this ; think I never heard her speak again ; she lay, I think, on her left side, with her face toward the south ; both she and he were weeping at the time ; her age was sixty-two when she died ; never had any sickness myself except ague ; it always deranged me ; my father was sixty-four when he died ; I frequently heard him say his future destiny, he feared, was bad : he would walk the house with exclamations that it would have been better for him if he had never been born ; noticed this for fifteen or twenty years before he died. He was always a very sedate, sober man ; he was a church member, very devoted, during my memory. Have a daughter married ; two years ago her condition was characterized by glassy eyes ; repulsion of her friends with improper language ; she was married and had one child ; she did no work for nearly six months ; they had a Doctor who now lives in Oswego ; she used personal violence to my wife once ; she struck her ; could see no occasion for it ; I came in and saw that there was a misunderstanding between her and her mother ; just came in the door as my daughter drew up and struck her ; Mrs. — face and eyes were very fierce and glassy ; think her conversation was broken and incoherent ; I have a brother Lyman ; nearly eighty now, I think ; saw him about ten years ago ; his physical health was good ; thought his mind a little affected ; he would say one day that he would do some particular thing the next day, and soon after would speak of doing something else.

ALBERT J. HOPPIN :

Am a brother of Edmond ; older ; was living about twenty-two miles from father's home, in '73 and '74 ; have seen my brother frequently since Lina's trouble ; heard of Proudfit's intended coming home in June, '77 ; saw my brother about that time, at my house ; saw my brother about the 11th of July ; I said I understood Proudfit was coming back ; he said something about prosecuting him ; he acted strangely ; walked back and forth wringing his hands ; we were there perhaps fifteen or twenty minutes ; I advised him not to prosecute him ; just after the trouble came out, I slept with him one night ; he was very restless ; spoke about the trouble ; said he could hardly endure it ; saw Ed. at the time mother died ; he wandered from room to

room; walked very fast, then perhaps sat down for a moment or two; then up and walked again; you couldn't talk with him—he wouldn't answer; he was very absent-minded; he was always very talkative before; noticed him at the festival with Miss Turner; he didn't take any part in the festivities; noticed a difference in his appearance a short time after he came; he kept apart by himself; didn't talk with me after he first came; he went away before the rest; Ed's weight had been one hundred and seventy-five or one hundred and eighty for about three years previous to the trouble; several times I noticed he looked haggard and thin. Had a conversation with mother as to her trouble; I told Ed. that the trouble was killing mother; this was after my talk with mother. Witness described Miss Hoppin's condition before and after the trouble substantially as detailed above. Ed. and Lina were always very loving together; he always got her a good many presents; she was very frequently with him.

Mrs. KATE MILLS:

Am a sister of the defendant; age is forty-four; was at home and helped take care of mother during her last sickness; lived about twenty-two miles from father's; generally went there two or three times a year; witness described mental and physical condition of her mother before the attempted suicide as already given; I went there six months after Lina was at home; her paleness and decrease of flesh, lack of cheerfulness, were unlike herself; her child had been born at that time; mother was almost as much changed as Lina; she showed it in her manner and conversation, and in her falling off in flesh; didn't see mother again till I was telegraphed for to come to her sick-bed; was with her twelve weeks before she died; when I came her face was drawn around, her left side was helpless; I could hardly understand her conversation; she partially recovered and then could talk somewhat easier; think the other side was affected before she died; she sat up in bed to take her food; Ed. came home quite frequently, and always spent his nights in the room with mother when there; she spoke to him of the "trouble that's killing us all," several times; he tried to have her recognize him several times; she would say "yes, its my good old Ed.;" spoke with Ed. frequently of the trouble that was killing us all; told him of mother's being constantly reminded of the disgrace and shame by the presence of Lina and her child, while he, the villain, was at liberty; Ed. didn't engage in conversation as before; wasn't as friendly and affectionate; always thought there was a peculiar look between Edmond and his mother; shown by their manner of meeting; always cordial; kissing when they met; this continued as long as they lived; he was an unusually good brother and son; mother relied on him more than the others; Ed. acted at the funeral as though he had lost his best friend; think I have been home but once since the funeral.

MELISSA BARNES:

Am a sister of the defendant; age thirty-seven; am a widow; lived at my father's; was not there at the time of the poisoning; came there a few days after; found my mother and Lina there when I got there; mother looked pale and seemed feeble; she was crying when she met me; seemed to have

lost flesh and her appetite; she never seemed to recover from the shock; she was down-hearted and cried a good deal. Heard some conversations between Ed. and mother; she would often say, "Oh, Ed., the villain that's killing me, I'm dying by inches;" then he interrupted by weeping; Ed. would seem almost frantic at these times; he grew down-hearted and thin; had previously been a very happy-dispositioned boy; I often told him that she cried a good deal in the night and was restless; I knew of this because there was only a thin partition between her room and mine. Ed. would often cry and look down and wring his hands. Sometimes he would answer questions, sometimes not; I spoke to him about mother's difficulty in walking; told him that she had fallen at two different times the winter before she died; she sprained her ankle on one occasion; she was troubled with this about a week; this was supposed to be a partial shock of paralysis; remember seeing Ed. at home in June, '77; my father and I were in the sitting-room when he and Miss Turner came; he had heard of Philip Proudfit's return; this was after the church festival; at the house that night he looked wild and agitated; would wring his hands and walk back and forth; he said, "Oh, dear, I can't have him come back;" he scarce ever called him by name; always spoke of him as the villain; he repeated his sighs over and over again; he spoke saying, "the trouble has killed my mother;" I was present the last time my mother was conscious; we had just gotten her up on the lounge, Ed. had his arms around her; I said, "Mother do you know who that is?" she said, "I guess I do, it's my dear old Ed.," then, "the villain that's killing me;" mother was deranged for nearly a year; Dr. Dewitt attended her, with Dr. Kyle as counsel.

MARY E. HUNTER, wife of John Hunter, of Sterling Valley:

Hoppin lived with us three years; I saw him almost daily while he lived at James Hunter's; I knew him very well; I saw him at the store and in the house before the homicide; a few days before, I was in the store and Dr. Proudfit came in and spoke to me; Ed. came up; stood by us; then walked back and afterwards came up again after Dr. Proudfit was gone; he looked very wild; then he went away again and came back and asked me if I had seen Proudfit; I told him I had not; his eyes were very glassy and wild; he watched me very closely; had seen him at my house about a week before, in the afternoon; said he wanted to talk with me; he said "where did you hear that Proudfit had got back?" I told him Dr. Proudfit had told me Phil. was at the Bay; he turned very white, and shook like a leaf, and said, "he mustn't come back; he killed my mother; I don't know whether you are my friends or not;" I said that we were; that he couldn't help what Lina had done; he said he had spoken to Lina, and told her that if she would behave herself and be a good girl, he would be a good friend to her all her life; he said Lina had told him that she hadn't been guilty with any other person only Philip Proudfit, he trembled all the time he stood talking to me; said he went to Cal. Green, and Cal. had said that he vowed he had never had anything to do with Lina; at another time he said of Proudfit, "he has come back to provoke me;" I said, "Ed., don't you touch him;" he said, "I don't intend to; I shan't have anything to say to him; I have written to my friends to that effect;" he was walking back and forth all the time, moving

his hand all the time; he didn't stay there very long; Thomas, my son, called him from the store.

Cross-examined. Ed. first mentioned Green's name in the conversation in the bath-room; had no previous conversation with Green; he spoke as if some one had told him about Green.

CHARLES SMITH, Sterling:

Have known the Hoppin's about thirteen years; saw the defendant at the church festival, June 22, 1877; heard that day of Proudfit's return; told Hoppin of it that evening at about half-past eight; he first came in and took an active part in the gathering till I told him; then he said, "is that so?" He dropped his head and went and sat down in the back part of the church and his girl went and sat down by him; don't think he staid over twenty minutes or so after I told him; he was more cheerful before than he was after it; I saw him on the fourth of July at the edge of the village; he was umpiring a game of ball.

JAMES HUNTER, Sterling Valley:

Hoppin was in my store a little over three years; then went to Clifton Springs; staid there till December 7th; worked for me till January, '75; saw him soon after the poisoning; think I saw him a few days after it; he was very much excited; he wanted to know if I knew where Proudfit was; he cried some; I saw him occasionally after that; he was sad; wasn't as lively as previously; came back into my employ in September, '75; staid there till July, '77; he was quieter and had a sad expression; was not nearly as fleshy as when he first worked for me; in '74 he weighed one hundred and eighty. A few days previous to the homicide he was frequently very much excited and very absent-minded; would face customers and not notice them; was very attentive to customers down to this time; he made mistakes in making entries; would charge for a pound of sugar and carry out the price for ten pounds; never saw anything of the kind before. These mistakes occurred all through these three or four days; I called his attention to them several times and sometimes he wouldn't remember anything about it; memory was formerly very good; he was very much excited when he went up to talk with Mrs. John Hunter; he ate very little and weighed less than one hundred and fifty; we had several talks as to whether I knew if he had come back; Proudfit's arrest was made at Charlotte; he was brought before Justice Douglass; I told Ed. that that Proudfit was guilty, and if I found out where he was I would tell him; my wife was an adopted daughter of Philip's father; Phil. was a good appearing, well-dressed fellow, a gentleman in the presence of ladies; he was under arrest at Sterling from evening till the next forenoon, to between ten and eleven.

SAMUEL HUNTER:

Live at Sterling Valley; age, twenty years; am John Hunter's son; was in the store with Hoppin up to a year before the homicide; saw Hoppin the 9th of July, 1877; I had noticed his appearance; on the 5th of July he called me into a back room and asked if I had heard that Phil. was around; I told

him I had; he told me that he didn't wish to see him; that he had come back on purpose to provoke him; told me that this trouble was the cause of his mother's death; he was very restless; kept rubbing his hands together, walking back and forth across the store; told me that if I saw Philip Proudfit, to let him know, that he wished to prosecute him; I said I would; one evening in the Spring, I think, I was in the store and he was behind the counter; Dr. Hugh came in and asked me if Phil. was around; I told him I didn't know; afterwards Ed. asked if that wasn't what Dr. Hugh asked me, and told me if I saw Phil. when I went West, to let him know he wanted to prosecute him; I saw Ed. walk West from the store once; his head was down; he walked slow; don't know just when he came back; on the 4th of July his eyes were red; his face was flushed; he looked discomposed; have seen ball-clubs in the store; they were simply kept there by the boys; were bass-wood clubs.

AMY E. TURNER:

Twenty years old last August: have been living with my uncle, Walter Hughitt, in Sterling; my father is dead—has been dead seven years; became acquainted with Mr. Hoppin three years ago: was there about four months; he paid his addresses to me; we were engaged the 20th of August, 1874; I went West afterwards; he visited me at my home in November; when I first knew him he was very robust and pleasant; very social and cheerful; came East again in 1875; he wrote me about Lina's trouble before I came; I came East to live in Sterling to take care of my grand-parents; lived two and one-half miles from Sterling Valley; when I saw Hoppin, after coming East, he seemed pale and worn; he had but little to say; he told me all about her trouble, coming from Oswego to Sterling; he wept bitterly and his hands twitched; never mentioned the subject after that evening; I never knew him to sit still five minutes at a time in his father's house except to eat his meals; was especially nervous if Lina's child was around. The same general description of Hoppin's appearance and actions as given by previous witnesses. In riding from his father's to my uncle's he seemed abstracted and would hardly answer my questions; on one occasion he sat still so long that I shook his arm and said "For mercy's sake, Ed., what are you thinking of;" the one word "Lina" dropped from his lips; this was just before his mother's death; at his father's house he would sometimes sit and look at Louis (the child) and then rise and go out of the house; his mother said to me once "Amy, I am here yet;" I told her I hoped she would be with us a long time; she said she thought she wouldn't be there when I came again; I said "you will find it a rest;" "yes, dear," she said, "a sweet rest;" then turned to the wall and said "O Lina, Lina;" I would ask Ed. at times if he was sick and he always said "No," until one night he looked so badly that I made him answer me; he said "It seems sometimes as if I could not stay in the store, turn which way I will Lina stares me in the face;" one night his mother was lying in the parlor, and he came and lay down on the couch in the sitting-room and shook with sobs; I asked him—"Ed. what is it?" he said "I can't give mother up;" I said "if it's willed that she shall die you'll have to give her up;" he said "I feel as if she was being killed; she often speaks to me of Lina and this trouble is killing her;" I remember the change in him after Charley Smith spoke to him at the festival; he was deathly

white and seemed in utter despair; I said "Ed. are you sick?" he said nothing and I said "anything new happened?" he said "no;" "what is it then," I said; he said "I'll tell you when I get a chance;" we got out of hearing and he said, "that villain is coming back; Charley Smith told me so;" he trembled and his hand was cold; I said "for pity's sake let us go home, don't make a scene here;" he said very little going home, he wanted to get out at Sterling Valley, but we persuaded him to go home; his eyes were inflamed and his face colorless; his head was hot and his hands cold; he said "I can forgive everything else but his killing my mother, that I can't forgive;" upon the night of the prayer-meeting, the Wednesday before the homicide, I saw Ed. and he spoke of having met Philip Proudfit; he said "I felt as if my head would burst; I felt as if I could drop down and die;" he spoke of prosecuting Phil. Proudfit, and I dissuaded him, and he said "if he doesn't leave I will;" our marriage was fixed for October, 1877; we were to live at his sister's at Sterling Centre.

Cross-examined. He told me Wednesday night that Proudfit had been in the store Tuesday night.

Re-direct. Ed. jerked away from me several times that Wednesday night, and I went to him again and took hold of his arm, and he pushed me away and told me to sit down, and I sat down.

STILLMAN COBB, North Sterling:

Knew Mr. Hoppin; I arrested him last July, Saturday night; he was at Walter Hughitt's; had him in custody till the next Tuesday; he made no attempt to escape; meantime, had him in no confinement.

Cross-examined. Was with him all the time till I brought him out.

KATE HUME:

Live in Sterling, near Martville, next neighbor to Mr. Hoppin; knew Edmond Hoppin; saw him at the time Lina's child was born, he was coming down stairs when the child cried; he stopped, stared and turned to go out of the door; he came back and sat down to the table; he ate but a few mouthfuls, when he got up and took another chair; saw him at the store just after the homicide, when he looked and acted as if he hardly knew what he was doing; I was looking at some dress goods; he didn't offer to show me any others nor to send to Oswego for me as was his habit; Mrs. Albert Hoppin was with me.

Cross-examined. It was between three and four o'clock in the afternoon; he said "I wouldn't care about his taking my heart out if he hadn't killed my mother."

EDMOND J. HOPPIN:

Age 26 last July; have lived at home mostly with my father; from sixteen I left my father's home during the summer; farmed during the summer for \$20 a month at McKnight's, and attended school in the winter; went to Oswego Normal school; staid a few weeks and went to Fulton to school and staid thirteen weeks; painted during vacation, and returned another term; then taught at Sterling Centre; then painted till September, and after that

engaged with James C. Hunter; boarded at John Hunter's; had charge of the store a good deal; I continued there over three years in charge; then went into the drug business in Clifton Springs; was taken with a bilious attack there; after a month returned to father's, the last of 1874; staid home some weeks; then worked one month for James C. Hunter; then returned to father's, remaining there till April, and after that went to Oswego, remaining there till July; then engaged with Jas. C. Hunter in August or September, 1876; staid there till this happened last summer; slept there at the store; boarded at James'; remember that Lina went to James Hunter's in April, I think of '74; I was in the store then; was acquainted with Proudfit several years; he lived with James Hunter; never had any trouble with him then; had not been very intimate with him; something of intimacy between him and Lina; once I went into the sitting-room and found them sitting together on the couch between eight and nine o'clock; asked my sister to make me a lemonade; she made it and I drank it and returned to the store; have often seen them talking together, but mistrusted nothing till the night I saw them sitting together; knew of no engagement, nor of her situation, till the poisoning; think she left there the 3d of January, '75; I took her to a party New Year's night at North Sterling; she took poison some time the last of January I think; I took her to Sterling Centre several times before the poisoning; I found her many times weeping without apparent cause; found her so once in father's parlor; tried to find out the cause but could not; she was very sad during the month of January; it seemed an effort for her to smile or converse; before this she was very cheerful, never subject to despondency; Lina was the youngest sister; she was less than two years older than I; had been in the habit of taking her with me when I could and she would go; was at Mrs. Smith's when I heard of the poisoning; Dorcas told me of the affair; I don't remember anything that was said or done till we got home; went home with father and Mrs. Smith; after we got home I went into the bed-room where Lina was; she lay on the bed, deathly pale; asked her what made her do it; didn't answer me just then; then she recovered some and said it was better she should die; I staid there a few moments saw a laudanum vial there; I took it into my hand; I saw and read the letter; don't know what was done with it; she was ordered to be taken up from the bed and walked; Mother was weeping violently when I came in; she was trying to attract Lina's attention: don't remember seeing Dr. McKnight that night; don't remember anything distinctly that night after reading the letter, except walking with Lina; had a conversation with Lina the next day; I asked her if that was her only offense; she said it was, as God was her witness; said I would be a brother to her if she would behave herself; asked her how she came to fall; she said she loved Proudfit as she did her life; she would have cut her right arm off for him; she said he promised to marry her before the occurrence; he promised her so lovingly and faithfully that she couldn't doubt him; had two more conversations with her after that, I think; I remember mother's saying that night that it was worse than death to the whole family; told Lina afterwards that we could have buried her if she had died a natural death and always loved her memory; that she had always been a true woman to that time; in the third conversation I asked her if it was her first offense; she said "Ed., it is;" told me that Proudfit brought her two kinds of medicine from Oswego; one

pills, the other a liquid; had no effect except to nearly kill her; I staid at father's about a week; I went to my sister's, Mrs. Smith's; Lina was about at that time; the next time I returned home I asked Lina why he didn't do as he agreed; she said he made the remark that he wasn't quite ready to be married but would be in a short time; that after urging him she told him her condition, and he swore at her; afterwards she wrote to him and he came and she had another talk with him, and then he took his clothes and left; this was the last she saw of him; she often wished she might die; I urged her not to take poison again; saw Lina at the time when the child was born; have frequently seen the child with Lina at home; Proudfit was arrested before the birth of the child; heard of his arrest, and the circumstances from father; I had told father that he was near Charlotte; father came back and told me that he had found him; Lina sent a letter imploring him to come and marry her; father took the letter to him; they stepped back out of sight and Proudfit read the letter; he said he would marry her; he wouldn't go back on her; father wanted me to go to Martville the next day to the examination; I couldn't go; father went and came back telling me that a flaw had been found in the warrant, and that he had left the county before he could get out another warrant; think Lina and mother were present when this was told me; mother seemed completely broken down; wept day and night; have heard her say, "That villain; we remain here crushed to earth, and he at liberty to ruin other families;" before this she had been a very hard-working woman; now her appetite began to fail; sometimes she wouldn't eat anything; began to lose flesh; never heard her complain of any disease; she talked to me of this almost daily; was not at home at the time of the partial paralytic stroke; think it was in January or February, '77; she died June 6, '77; when she was attacked she came in and was walking across the floor and fell without stumbling; she sprained her ankle in falling; saw my mother a few days after; she was sitting up; had a talk with her about our trouble; she said she seemed dying by inches from the trouble that had been brought upon her; said she could not sleep; her thoughts kept her awake; after her shock she had no use of her left side; I went and sat up with her once or twice a week, I think, after this; during this time mother appeared very much depressed; the last time she was conscious was only a few days before her death, I think; she was lying with her right hand on her heart; I kissed her and asked her how she felt; she said "that villain that's killing us all;" I said "what villain, mother?" she said "that villain Proudfit."

[This portion of the evidence was extremely affecting both upon the witness who wept profusely as he gave it in so feeling a tone and manner, and on the immense audience whose tears flowed freely at the recital of the sad, sorrowful, and heart-touching account of the last interview of the witness with his mother, between each of whom there had evidently always been the most sincere, devoted and unbroken affection and fond attachment.]

After this she spoke to me once; we were moving her on to the lounge; I asked her if she knew me; she said "yes, its my dear old Ed.;" I went back to the store and came home the morning of the day she died; think she died just before dark; the church festival was the 22d of June, '77; I had two anonymous letters, received, I think, in April or May; Mr. Hunter, also, at the same time; don't know whom they were from; first letter was that he was

there and that he (the writer) would do all he could to help me arrest him; signed J. C. R.; never knew who it was; I addressed a letter to the Post Office on post mark, with initials on the address; it was returned to me; received a second letter from the same person; same initials and same handwriting; to the effect that he had just ruined a lady there and I must come quickly if I wanted to arrest him; Smith called me away that evening and said that Ben Post told him Proudfit was coming back; don't remember any conversation afterwards that evening; my sleep and appetite have both failed; I have taken chloral to make me sleep; some nights I didn't sleep at all; especially after going home; never troubled with sleeplessness before this; I weighed one hundred and eighty-nine in the winter of '72-'73; weighed about one hundred and seventy-five, I think at the time of the poisoning. The Tuesday before this happened my brother told me that Proudfit had been seen at Red Creek; father told me a day or so after Charles Smith had spoken to me, that he had settled for his own expense and trouble only; Benton Post had offered the settlement for Proudfit, and father agreed that he might come back as far as he was concerned; Lina knew nothing of this; I said any of us would have given him \$100 rather than have taken it from Proudfit. At this time I couldn't fix my mind on anything; could not add up columns of figures; used to carry three columns at a time, but now was scarcely sure of one; couldn't remember what I heard or what I read; have twice found myself in the bed-room that my sister formerly occupied at James Hunter's, without remembering how I came there; don't know why I went; don't remember my conversation with Mrs. Hunter in the bath-room; was told of it afterward; was thinking of mother's death, its cause and her last words, during all this time; frequently dreamed of her; have seemed to see her, and have gotten out of my bed and gone into the other room; this occurred twice; think it was a week or two before the homicide; have dreamed of Lina's child having no name in the world; never made any such statements to Mr. Smith and Mr. Cooper as sworn to, so far as I remember; never had any bloody feeling toward Proudfit; I had a kind of terror of him; had made up my mind to leave town if he came back; I thought he was coming back to torture me; Charles Johnson told me that he could do just as he wanted to, because we were all torn to pieces, my mother being just dead, and all that; never felt fear till I heard he was coming back; first I saw of him was Wednesday before the homicide; Thomas Hunter, 2d, said that he had been in the store that morning; I saw him pass the morning of the homicide; didn't speak with him; was not within eight or nine rods of him; he came into the store in the afternoon; I stood by the desk in the rear of the store, near the post office; Proudfit came up as I stood there, and said "Ed., give me that paper," in a very friendly manner; I handed it to him, and he stepped up to me and said to me, "You've lived through it haven't you?" I don't remember another thing till I stood over him; it seemed as if he had been struck; don't know where I got the club; they often laid on the counters and I had to put them away. Thought I would put him out of the store; had nothing in my hand at the time; had a revolver in my hip pocket, with seven loaded chambers in it; carried it for protection, to protect the store and post office; don't remember Mrs. Hume's coming there nor any conversation with her; have had a good many dizzy spells here in jail; have not eaten much; have taken but two meals a day, and at many of them wouldn't eat a mouthful.

By the Court. You say you have a recollection of being over him on the floor and that a blow had been struck, now what is the first next thing that you remember? Of meeting my brother-in-law Mr. Duel, I have never for a moment felt that I had any guilt in the matter; I never intended to injure him and never felt angry towards him; it was a feeling different from anger.

Cross-examined. Know Charles Crossman; I do not remember seeing him that day; don't remember that I told him that "I had struck the black-hearted villain;" think I told Stillman that; he asked for his uncle's paper, and then told me I had lived through it; remember this only from hearsay; remember his going away; remember being before the coroner; heard some witnesses sworn; have read some here in jail; read of the trial of Pierce, at Lockport, where the defense of temporary insanity was interposed; was confined in lower part of jail when I first came here, and was removed to an upper room; health was better since that; don't think I had been taking chloral at the time I thought I saw my mother in my sleep; I awoke out of a dream; room in the store was below; seldom went up to the upper part; continued in the store for these many years; had principal charge of it.

Re-direct. I think I never had any disturbance with any one in my life; never was arrested, nor sworn on the witness-stand.

Jailor ROSEBOOM, testified:

I have had charge of Hoppin since October; he acted very strangely when he came there, paying little or no attention to the questions asked him, saying nothing unless spoken to, and then but little. His eyes were red and he complained of having a severe pain in his head; his sister Lina came to see him once, and the next morning he said he felt that he could not stand on his feet, he was so dizzy; he did not eat any breakfast that morning, and only a small piece of bread was gone from his dinner; he ate no supper that night; I asked him if he wanted a Doctor, and he said in a loud, short tone, "No," which was the only time he ever spoke to me in that way; always whenever this sister had been to see him he has complained of his head; the Doctor has given orders not to let her see him any more. Up to October his appetite was poor, and I have known nothing of it since.

Cross-examined. He has written several letters in jail the writing of which seems fair and plain; do not remember of his complaining of being dizzy only when his sister had been to see him; he would weep at these times.

Dr. C. L. GEORGE, testified:

I have been a physician about twenty years; I have seen Hoppin frequently in jail, first a few days before he went to the upper room; have seen him after the visits of Lina, once being sent for to see him, after she had been there; his hands were cold and he was excited, and asked him if her coming had not excited him, and he after a time acknowledged that he thought it did, and at my suggestion he consented to have her kept away for a time; I also requested of Mr. Roseboom, that if she must see him, the child be kept out of his sight; his symptoms indicated great nervous excitability; his temperament is nervous sanguine.

Cross-examined. The last time I visited him was last week.

Dr. LANSINGH BRIGGS, testified:

I heard the testimony of Drs. Proudfit and McKnight, at least in part; the symptoms of concussion of the brain are insensibility, remaining for hours or for days; this symptom is invariable. Q. Suppose a blow on the skull made by a ball-club as, and in the region described, and the person falls, but soon struggles to get up, and does of himself get up, would there have been concussion of the brain? A. There would not; I can not conceive that such a blow would cause a rupture of the blood-vessels of the head; there are no very large blood-vessels in that locality; I have known cases where clot was formed in that locality, in which the patient died in twelve hours; the symptoms would be, complaint of pain in the head, stupor and hard breathing. Q. If the patient after receiving a blow of that kind continued conscious for many hours, and said he felt better and brighter, would there be hæmorrhage of the blood-vessels of the head? A. Very slight, if any; I regard the treatment of the case as given by Dr. Proudfit as premature; his head should have been elevated; instead of the calomel I should have kept him quiet, putting cold applications on his head and perhaps bled him; the purgatives might have been proper after bleeding; I should have tried to have got along with only one dose of calomel of some fifteen grains, and should not have given anyway but one dose, but should have tried something else; if those doses did not act as a cathartic they would almost inevitably have caused vomiting, and the more they were given, the more and severe would be the vomiting; the effort to vomit so frequently was a result of the calomel, I do not think the vomiting alone would have burst the blood-vessels in the head; the blood-vessels are ruptured from various causes aside from an external injury; from the description of the clot as given by Drs. McKnight and Eldridge I judge it was formed of venous blood.

A blow that separated the dura-mater from the skull would not rupture the blood-vessels; while the person remained conscious there could not be much hæmorrhage in the cranium; the vessels having been once opened and closed could have been reopened by vomiting; vomiting, in cases of compression is not a dangerous symptom, neither is it desirable; I heard of no symptoms of inflammation in the case; the convulsions must have been caused by compression; we can judge something of the time of the existence of a clot by its appearance.

Cross-examined. Extravasation occurring between the dura-mater and the skull is generally caused by external injury; I think the inner table of the skull must be fractured in order to produce a rupture of the blood-vessels; I have never seen blood between the dura-mater and the skull without a fracture; such statements are reported in the books, but so far as I know no specific cases are given; I judge that the clot described was too much diffused or spread out to cause compression; I mean by concussion, a jar to the brain producing unconsciousness; a blow on the skull may not cause a fracture at that point or place, and yet produce a fracture in some other portion of the skull from which the blood from ruptured vessels would flow up to the point where the blow was received; extravasated blood between the outer and inner tables of the skull would usually be fatal.

Dr. J. D. BUTTON, testified:

I have heard the testimony relative to the wound, but heard no evidence of compression; all the treatment in such cases that I know of as best, are quietude and an elevated position of the head; I know of no reason why calomel should have been given, and the larger the doses and the more frequent, the greater the injury produced; no evidence of the hæmorrhage in the case until the convulsions. The vomiting as described might have ruptured blood-vessels; I can not conceive how the vessels under the blow could have been ruptured by the blow as described.

Dr. CARLOS F. MAC DONALD, Superintendent of the State Asylum for Insane Criminals, testified that he had heard most of the testimony—all of the prisoner's evidence:

I will ask you further, did you hear the evidence as to the condition of mind of the grandfather, and uncle, and cousin, and sister? Yes, sir, I heard the evidence, I think in regard to his (the prisoner's) heredity. What is evidenced by those symptoms? It seems to me that he was in some abnormal state of mind at the time of the homicide, *assuming the evidence I have heard to be true. Including his own evidence that he was unconscious of the act?* Yes, sir. What do you mean by abnormal? That he was not in his right, or natural state of mind. What do you say, if taking that evidence as true, as to his having sufficient knowledge or will-power to guide him or to know right from wrong in reference to the act?

Objected to.

The Court. I am compelled to sustain the objection made.

You heard the testimony of Mrs. John Hunter, in which she speaks of his condition when he came to her house a week before, and the instance in the bath-room, and his condition of mind there? Yes, sir. And also the walk on the same morning in front of the house, and the gestures, etc., made there? Yes, sir. And you heard him speak—you heard Mr. Hunter speak of his inaccuracy in figuring, and all that? Yes, sir. And heard him speak of his finding himself in places and not knowing how he came there? Yes, sir. And also of his loss of knowledge or having no memory of what took place at the time after he started, until after the blow was struck, you heard that? Yes, sir. What did that indicate in relation to knowledge or condition of mind of the man? It indicates some mental disturbance. What in regard to his having power to control the will? During the time he was unconscious he of course had no power of will. What did it indicate in regard to his having knowledge of the act, if he had no memory of it afterward? It would indicate that he had no knowledge of it—not that his memory was lost, but that his power of attention was suspended during the time. You speak of not being in a normal condition of mind, do you term that some form of insanity? Not necessarily. What do you think about it, *supposing all these facts to be true?* Taking into consideration the hereditary history, together with the conditions which may be deemed as exciting causes, and his temperament, and the continued sleeplessness, it would tend to create a suspicion that he was insane at the time, but I don't think I would be justified in giving a positive opinion upon that point. Is hereditary tend-

ency recognized as one of the strong evidences—in fact a strong force producing insanity? It ranks first as a predisposing cause. What do you say in reference to constant thinking upon one subject, or brooding over one subject for a great length of time; is that recognized as a very effectual cause of insanity or disease of the brain? It is recognized as one of the manifestations of a condition which may lead to insanity, or which might be approaching insanity. Hoppin speaks of going to different places and finding himself, and not knowing how he came there, what did that indicate? It would indicate bewilderment. And disturbance of the mind? Yes, sir, that would be a disturbance, whether temporary or not, it would require further evidence to determine.

Cross-examination, by Mr. Paine. Might not that be an indication of absent-mindedness in the same person? Yes, sir. The grief he manifested on different occasions when this matter was spoken of, and for years prior to the homicide, is there anything inconsistent in that with sanity? No, sir. The grief in itself was rational? Yes, sir. His actions when the subject was referred to, were in themselves rational, were they not? I should say so; his manifestations of grief were certainly; they were such as would be expected in a sensitive, sane mind, I should think. His dreaming he saw his mother on these two occasions, and going into the other room and discovering immediately his mistake, there is nothing irrational in that, is there? No, sir, nothing *insane* in that, I should say. Does the hereditary history have any particular weight; if there is some physical cause, some physical disease to account for the insanity, that is the fever and ague in his father, and delirium of fever, does that throw any light upon the hereditary history? Not necessarily; still if the father had a hereditary taint that would throw a little upon it. His own father? Yes, sir. The mere fact that his father, while he had fever and ague, was in the delirium of fever and was insane, would that throw any light upon the hereditary history? It would indicate that physical disturbances were likely to manifest themselves in mental aberration. And still the same thing is quite liable to take place where there is no hereditary taint? Yes, sir, but perhaps not quite so likely in ordinary malarial fever. In the case of the grandfather, was there sufficient history given of him and his excitement about the future—his religious excitement—was there sufficient history given for you to say there was insanity in the grandfather? No, sir, merely enough to create a suspicion of it. Being rational upon other subjects and talking rationally at times, and being conversed with upon religious subjects, and being cheerful, and taking that into connection, is there enough to show there is a suspicion of insanity in regard to the grandfather? Yes, sir, I think there is enough for a suspicion that he was suffering from mental aberration. But not enough to furnish any positive evidence? No, sir. In other words you would want a good deal more evidence in the case? Yes, sir, a great deal more evidence than that. If the sister, in addition to her inflammatory rheumatism, had any disease of the brain, water upon the brain I think was the term used upon the witness-stand, would that be sufficient cause to produce temporary insanity? I should think it would. And the fit, or fainting scene, whatever it was, described by the Doctor—Dr. Dewitt? I didn't hear Dr. Dewitt's evidence this morning; he left the witness-stand as I came into the Court House. Suppose she was sitting in a

chair and had been complaining of inflammatory rheumatism in the feet and ankles, and while she sat there talking with him, seemed to faint away, and fell back in the chair like a person dying, as he stated, and remained so for a few minutes, and then coming to, was a raving maniac and delirious, and continued so for some weeks, gradually recovering in the course of a year, what would you say in that case, connected with the symptoms of water on the brain?

The Court. Dr. Dewitt did not state about the water on the brain.

Well, leaving the water on the brain out, take the other matter into consideration, would that be a sufficient physical cause for temporary insanity? The rheumatism? The swoon like a person dying, or fit? I should hardly put that down as a cause, the simple fainting; it would depend upon the cause of fainting away, that might also be a cause of insanity. I suppose if it turned out Hoppin recollected the next Sunday morning what did take place so he could relate it, would that have made any difference in your estimate as to suspicion of insanity? Yes, sir, I think it would tend to modify it somewhat. Would that have tended to show he could distinguish, and had the capacity to distinguish the nature of his act? Not necessarily. Would it tend to show it? It might tend to show it and it might not; I don't think I can answer that question more explicitly than that, because insane people do remember sometimes very distinctly, and have a vivid recollection of an act or series of events, the true nature of which they are not capable of distinguishing. If there was any insanity in this case would it be temporary or transitory? It depends upon what you mean by temporary. What is termed by authors transitory mania? Authors differ in regard to "transitory mania," or what they regard as "*transitory mania*." Of course the fact that there was a strong motive for the act committed would tend very much to weaken the idea or suspicion of insanity? It would somewhat; the absence of motive is generally regarded as a suspicious element. The fact that but little violence was used, does not that tend strongly to show or to weaken the suspicion of insanity, that is that it was not followed by repeated blows? In this case I could not determine very much by that fact; in some forms of insanity excessive violence is characteristic. It is generally, isn't it, in all forms? It is frequently; yes, sir. If it turned out he had talked about this matter to other persons, stating that he would like to see his heart's blood spilled, in speaking of Proudfit; in other words that he had thought about the subject and meditated about it, would that fact tend to weaken the presumption or suspicion of insanity? That would tend to weaken the suspicion that it was an impulse of the moment, but it is well known that insane persons do meditate and watch for an opportunity to carry out an act of violence. When an insane person commits a crime isn't it without premeditation? Most generally I think it is. And laid down by authors as one of the means of detecting whether a person is insane? That is one of the elements to take into consideration in forming an opinion.

Direct Examination, resumed by Mr. Howland. Suppose the party seeks no privacy in the matter, is that an indication as to whether the act was an insane act or not, suppose it is done publicly in the presence of somebody? That may have some weight in a given case, in regard to establishing the character of the act itself. And where a person makes no effort to escape or concealment, what does that tend to show, and feels no regret over it, that

is that he has not done any crime? It tends to show the absence of a knowledge of the act, or indifference as to the result. Where an individual contemplates and premeditates a crime, of course that planning is a criminal act, and suppose he commits a crime, he will be apt to have a realization he has carried out a crime, taking a sane man? I think that is hardly a medical question, what a sane man may do under certain circumstances. In the absence of regret or feeling that the man has committed a crime, where there is no feeling afterward that he has committed a crime? That might indicate unconsciousness on the part of the individual at the time of the act. Would it not indicate there was no premeditation or planning before the crime was committed? I think it would; it would tend to characterize the act as an impulsive one. The fact that he talked about it, and stated he had done it afterward, publicly, is that not an indication of the condition of his mind? I think an individual who does an act in an unconscious state of mind, or rather when he is in an imperfect state of consciousness, may tell of it before he emerges from that condition, and afterward emerge and have no clear, distinct recollection of it. Suppose he talks about it at all afterward, would he be just as likely to say he did it, and talk about having done it and boast of it, if he was insane when he did it, as any other way? Yes, sir, I think he might talk of it. Now his talking of it in that way, would that be any indication of the condition of his mind? No sir, not necessarily. Might it be? It might be. Isn't it laid down in the works that a person committing a homicide in a state of insanity, would be very likely to talk about it in a boastful way and tell about it? Very apt to when it is done under the influence of delusion, or when it is regarded by the person as an act of self-defense.

The Court. Do you see any evidence of delusion? I suppose Mr. Howland refers to the belief which the prisoner had that the deceased might return and torture him, or do him personal violence; I am not positive that was a delusion—it may have been—I don't know. Suppose he never had felt any desire in his sane moments to commit any violence upon this man, and only had felt a dread of his being there, and he had imbibed the opinion in his head he was coming there to annoy him, and there had been no word of the kind, would that be any evidence of delusion? Yes, sir, there is no reason why he should not have a delusion about him as well as about any other person. Now you speak of excessive violence being used and about what is evidenced by that; is it not in cases of homicidal insanity, where it takes a homicidal form, and murder the same, where they use such excessive violence? I think it is more frequently in the blind fury of epileptic mania or frenzy that excessive violence is used. Mental epilepsy is instantaneous? It is sudden sometimes. Isn't it called that?

The Court. What do you mean?

Mr. Howland. I mean manifests itself suddenly like an epileptic fit.

Witness. The epileptic seizure is instantaneous. The bad effect of it is usually sudden? It is usually sudden in the onset. Do you see anything in this case in the symptoms or his conduct there, indicating an aberration of the mind during the progress of that act, for instance, take the act of striking the blow, holding him without attempting to do anything else? I don't know that I could infer an aberration of the mind from those facts stated. Would it be any evidence? Of course, his own evidence of the state of his

mind. The act, as indicated by the act itself? No sir, that is not positive evidence of aberration of the mind. Is it any evidence? No, I don't know that I can say the act by itself, is an evidence of insanity. What you understand by motive, in connection with other evidence, would that be any evidence without any connection with all the — ? In order to give an opinion it would be necessary to take into consideration all the events and circumstances surrounding the act, and then couple that with the entire history of the individual, including his heredity. And in doing that would you give this any weight? I think I have indicated my opinion upon the whole case. There is such a thing known and laid down and well recognized as religious mania? There are cases of mania with religious tendencies of thought. You take a person, an upright, exemplary person, a man professing to be a christian and living up to it as well as he can, and he gets an opinion in his head he is going to be lost, and harbors that for ten or fifteen years, a constant brooding over that, would you say that indicated a condition of monomania? That might be a delusion, monomania is simply mania after all, monomaniacs are made according to the fancy of the writer in his subdivisions. Would that be an indication of mania? Yes, sir, mania or melancholia. That is a form of insanity? Yes, sir, where there is delusion of that kind, with depression, it would be more properly called melancholia. Now you take a family where insanity is hereditary, you spoke about what was indicated in the father, is that laid down and is it a fact in your experience, is it confined to immediate direct relatives, direct ancestors? No sir, it may sometimes skip a generation; I don't think the disease itself is transmitted, but the predisposition, the tendency to disease, and that the disease may not crop out in a generation, and yet appear in the next generation; that the tendency to disease may skip a generation and yet be transmitted to another. You think a person predisposed by hereditary taint might pass through life without showing it? Yes, sir, and yet his offspring might. What would bring it on? The predisposition would be inherited, and certain circumstances might act as exciting causes to bring on and develop disease. Would great grief and sorrow be an adequate cause? Yes, sir, it is recognized as an exciting cause; some writers would term it a moral cause, but others emotional disturbance, and which finally becomes insanity; assuming insanity to be a disease of the brain, an emotional disturbance may become a cause of insanity. What form of insanity would that be called? That would depend upon the manifestations of it; causes do not really determine the form of insanity. Is there an insanity known as emotional insanity? There are cases of insanity in which emotional disturbances predominate. Any cause which produces cerebral congestion, does that tend to bring on insanity? Cerebral congestion may be an exciting cause, and is in some cases, no doubt. You have read Dr. Hammond's work I have spoken of? Yes, sir, I have read a good many of his writings. Have you ever read Dr. Maudsley's work? Yes, sir, and his *Journal*. Is he recognized as a standard author? Yes, sir, but I desire to say that in recognizing writers as authorities I do not wish to be understood as endorsing *everything* these writers say. Is he recognized in the profession as a standard author upon that subject? Yes, sir, he is an eminent writer. What do you say about the *JOURNAL OF INSANITY*, published at Utica, by Dr. Gray? That is a recognized journal in the specialty. It is *the* journal in this country upon that

subject. That is under the superintendence of Dr. Gray? Yes, sir. Of the Utica Asylum for Insane? Yes, sir. Do you peruse that? Yes, sir, I take it and read it regularly, and have for a number of years.

Cross-examination, by Mr. Payne. There are quite a number contribute to that Journal? Yes, sir, a number.

Direct examination resumed by Mr. Howland. Is Dr. Ray a recognized authority? Yes, sir, on the jurisprudence of insanity. Where he treats upon the causes of diseases, is that recognized as authority? Yes, sir, he is regarded as authority on the jurisprudence of insanity.

Cross-examination resumed by Mr. Payne. Wharton and Stillè's recent work on Medical Jurisprudence? Yes, sir, I think "Wharton and Stillè" an excellent authority on medical jurisprudence. Insanity is the result of disease? Insanity is a disease. A disease of what? Of the brain. It indicates a disease of the brain? Yes, sir, a disease of the brain; but that does not define insanity. But it is a disease of the brain? Yes, sir. And does not exist without the brain is diseased or disturbed? No, sir.

By the Court. You do not recognize any disease of the mind without it is a disease of the brain? No, sir.

Direct examination resumed by Mr. Howland. This disease manifests itself in a great many different forms? Yes, sir.

Dr. THEO. DIMON, being sworn and examined by Mr. Howland, testified as follows:

* * * * *

What do you say as to cerebral congestion being the cause of brain disease? It is a brain disease itself. How may that be produced; how is it produced? By a great variety of causes; emotion is one cause of cerebral congestion. Emotion? Yes, sir. Arising from what? From any affection of the mind or feelings. And the more intense the emotion the more prolific the cause? Yes, sir. Have you read Dr. Hammond's work on nervous diseases? Yes, sir. What do you say as to that being a standard and approved authority among the profession? It is a very good authority in regard to nervous diseases generally, but does not rank quite so high as a work on insanity. What do you say as to hereditary tendency in this matter; the hereditary taint upon this subject? That is recognized as one of the predisposing conditions to render a person liable to insanity, an inherited tendency or taint. Now, as to any nervous diseases in the family, in the ancestors or relatives, whether direct or collateral, being subject to nervous diseases of any kind, what do you say as to the tendency of that upon the mind? That is recognized. As to any nervous disease, whether it be called insanity, or epilepsy, or hysteria, or anything else in the ancestors or direct relatives or collateral relatives, whether that is regarded as having a tendency or being an evidence of insanity, or being a producing cause? The occurrence of epilepsy and palsy, or any marked disturbance of the brain in one generation may evince itself in the descendants. The tendency to that particular form or some other, one of which might be insanity. A person dying of palsy his children may have palsy or be insane. Suppose a person has palpitation of the heart? That is too indeterminate. Is that a nervous disease? Sometimes it is. And how about paralysis? That is always a

brain or nervous trouble. What do you say as to the effect of continual thinking or brooding over any subject of great grief for years, what is the effect or tendency upon the mind in such a state of things, as a producing cause? It is liable to produce a diseased action of the brain, and may manifest itself in some form of insanity. Now, you take a person predisposed to that by hereditary taint or any other causes, and what do you say as to dreams; to just a dream sometimes being the first kindling spark that brings out the insane condition of mind? I don't see much connection between simple dreaming and the production of disease, after the sleep is over. Is that laid down so in the books? It is sometimes spoken of as one of the first manifestations of a tendency in that direction; certain classes of dreams repeated the same way and disturbing sleep. What do you say as to there being a form of insanity called emotional insanity? I am not in the habit of recognizing that as a class; it is a manifestation of insanity; it manifests itself in delusions; insanity sometimes takes an emotional direction. May this condition of things result from sudden causes? Yes, sir. And also from those that come slowly upon the person? Yes, sir. Now, in such cases of insanity is there necessary, or is delusion an indispensable symptom of the case? Delusion, hallucination and illusion, and incoherence, some one or more is necessary to make out insanity. But not all? No, sir, not all. May there be such a case as insanity without delusion? I would put in insane delusion; simple delusion is not insanity, and hallucination may not be more than a tendency that way. I ask whether a person may be really insane without delusion? I rather think not; it is possible there might be a degree of insanity with simple hallucination; I think delusion is an essential element of insanity. How do you define delusion? Since I have had to testify upon that subject I have written out my opinion and I will read it. Reads: "An insane delusion is the belief that false or imaginary perceptions are true or real; or that false or imaginary ideas or conclusions are true or real; and that contrary to the individual or common experience of mankind." That is your idea of insane delusion? Yes, sir. And these delusions may be in regard to almost any subjects? Yes, sir. Or any conceivable thing? Yes, sir. How in regard to a person's forming an idea that a person is coming to hurt them or injure them, and brooding over it, when there is no such fact, or evidence of such fact? That would be an insane delusion, if there is no reason to base such a belief upon. Are homicides sometimes committed under an emotional insanity or disturbance of the brain?

The Court. I do not understand the doctor to have recognized any such form or species of insanity.

I will say insanity then without qualifying terms? The question is whether a person under the influence of emotional delusion, will suddenly commit homicide? Yes, sir, such cases have occurred. Do they frequently, in your experience? Homicides are not frequent to my knowledge; taking the whole class of insane with homicidal impulse, their numbers are not very large in proportion. Do acts which are committed under the influence of insanity sometimes closely resemble those done in the heat of passion as to the act itself? Yes, sir. You have heard the evidence in this case? Yes, sir. In regard to the whole of this history of the defendant's troubles, and his conditions and symptoms of mind, including his own evidence of what took place upon that occasion? Yes, sir, I heard the whole of it. Now

what do you say, what do those facts indicate as proven? There seems to me to be some evidence of heredity in the case; the uncle had insane delusions and his son had hallucinations, and the prisoner's sister had acute, tending towards chronic mania, *according to the testimony*, and the mother died of palsy, and the grandfather had religious melancholia,—*I am not positive that in the medical sense melancholia existed*, but I think the testimony created some suspicion of that, and perhaps those things go more to indicate possible hereditary taint. The long continued disturbance of the mind by a family misfortune, and the evidence of disturbed and impaired nutrition is given; of some sleeplessness; of frequent brooding and disturbance of the mind; and the health from this same cause; and finally some evidence that the person had got a belief contrary to the persuasion of his friends that the presence of this individual was a torture to him; that his coming back and coming to the place for no other purpose than to torture him; that he believed that this individual intended that in coming, gives me a suspicion of a delusion upon that subject. The fact that in this state of excitement described, his head was hot and his extremities cold, and that that occurred frequently, establishes a presumption of temporary and repeated congestion of the brain. Taking all those things together, and this account of his condition at the time of the transaction, before and afterward, and of the fact that a fully sane person would be strongly affected under the influence of so strong an emotion as ordinarily belongs to the formation of a marriage contract, that he should commit such an act as this immediately afterward and in the manner in which this was done, seems to give me an impression and an opinion that it was not a sane act; *though I can not say there is positively enough made out for me to give a decided opinion to that extent*; it creates in my mind a strong presumption that that was not a sane act. A person being in the condition of mind you have been describing here, what would be the tendency if the person in regard to whom the delusion existed, should come suddenly in upon them and bring it up before them by the remark, "*You have lived it through, have you,*" what would be the effect of that upon the person; might the object of the delusion appearing at any time and under any circumstances set the delusion in action? It would have a tendency to do it. What do you say as to the fact, if it was a fact, that this was done without any secrecy and publicly and in open daylight, and in the presence of others, what would that tend to show? That in itself, taken consecutively, and taken in connection with all these other groupings of facts as I understand them, would be what would be expected in such cases where there was a delusion. He would talk about it? He might talk about it and boast of it in private, and an insane person might conceal such a thing. Suppose it was done in the presence of a man whom he knew? It goes to show to my mind simply the fact that *it was not a pre-meditated crime, it was done on emotion existing at the time*, either an insane delusion or a fit of passion. Suppose when he comes forward from the back part of the store, he walks all the way without any particular expression of passion or anything of that kind, and no word being said, what would that indicate? Persons vary under passionate excitement, about the method of expressing it. What do you say as to the fact of his having a revolver in his pocket and not using it, would that indicate anything? It would indicate that *there was not a formed design to commit homicide*, the

fact that he did not use the best means to accomplish it. An insane person may design murder or may design homicide; that in itself does not in my mind amount to much of anything. Did you hear the evidence in relation to striking the blow, and the manner in which the blow was struck? Yes, sir. And then what took place afterward? Yes, sir. Of the person falling and he going and taking hold and holding him down, you heard that? Yes, sir. And then running out towards the back door and coming back again soon? Yes, sir. Is there anything in that taken in connection with the other circumstances, showing the condition of his mind? Perhaps it has some slight connection, *a confusion or weakness of mind*, it was rather a childish method of doing it. You have heard it related here by himself and the other witnesses, about these continued emotional disturbances, or whatever you may call them, and the grief and the expression of it for two years before? Yes, sir. Would they tend to the result you have been describing? Yes, sir, they would, perhaps, have such a tendency. What would you say if he talked about it afterwards to different individuals and does not remember what he said about it, would that indicate any condition of mind particularly? It would indicate unconsciousness, an entire unconsciousness of what he was doing at the time. In cases of premeditated homicide, would a person after it is over recollect it usually, a sane person? I suppose they do. There would be no want of recollection in such cases? No, sir.

Objected to.

How in regard to the forgetfulness of it, would that indicate any condition of mind? That would show a loss of memory about it. Does it have any bearing upon the question of premeditated design or intent? It would show more the present condition of mind than at that time. His having no consciousness of crime, would that have any bearing? That goes to show the state of the man's brain and mind at the time. That it is thus unconscious? Yes, sir. Now is there anything in the act itself by which a person can judge whether it is a sane or insane act usually? Not often; sometimes it constitutes one element. Suppose you step into a room at the very time that a man draws a revolver and shoots another, would you discover anything in the act itself that would show his condition of mind? No, sir, not in the shooting simply. You would have to look to other circumstances to indicate that? Oh, certainly. How about an insane person when he commits an act, does he attempt any secrecy or avoid telling of it? Usually, I believe not. Insane persons may plot a crime? Yes, sir. With a good deal of tact? Yes, sir, and usually a great deal of cunning. In such cases would they be apt to secrete the matter and not tell of it? They might and might not. But where there was no premeditation and no thought of having committed the act and no consciousness of having committed the act, would there be any attempt at secrecy? I should suppose not. The fact that a person does not make any effort to escape after committing a homicide, does that show any condition of mind? Alone, that shows that he considered what he did justifiable. That is, if he considered anything about it? Yes, sir. It would go to show he was not conscious of committing any criminal act? It would simply show in itself alone, that he did not think he was doing anything wrong. Isn't it laid down by Dr. Hammond that an insane person, a person who commits homicide in an unconscious state does boast of it to his friends and tell of it? Yes, sir. And if he is in an insane condition he will talk

about it beforehand? Yes, sir. And make no secrecy at all? No, sir. Did you hear the evidence of Mrs. John Hunter in regard to his going there about a week before the occurrence, and calling her into the bath-room and talking with her there? Yes, sir. And his appearance and condition? Yes, sir. What did that indicate? *From her description of his appearance it indicated a strong cerebral excitement; perhaps congestion of the brain.*

The Court. Explain what congestion of the brain is? It is undue, abnormal, increase beyond the natural amount of blood that ordinarily circulates inside the head that does not return from the head; too much in it. Cerebral congestion would be in that portion called the cerebral portion? Yes, sir. I asked you the causes that produce it? I gave you one and supposed that was what you desired. Any cause that produces great excitement in a person creates sorrow or joy? Yes, sir. Or any very exciting cause will have a tendency to produce this cerebral congestion? Yes, sir, one of the worst cases I have had was produced by fire in the house where the person lived. That is produced by throwing an enlarged quantity of blood in the brain? Yes, sir. So it forms a congestion? Yes, sir. And has temperament a great deal to do with this, the peculiar temperament of the person? Some persons are more liable to it than others. More sensitive and quicker to be acted upon? Yes, sir. And more apt to have these results follow? Yes, sir. What are the symptoms of the disorder, cerebral action from congestion? They are very numerous. I will ask what would be the temperature of the head? It is generally increased. Hotter? Yes, sir. And in such cases what would be the temperature of the extremities generally? Cold. There would be no equilibrium throughout the system? No, sir. Will pain in the head sometimes be the result, a headache? Yes, sir, that is one of the first signs generally of the condition—pain in the head. That is caused by this congestion? Yes, sir, and dizziness and vomiting. Will such a state of things be apt to exist through a term of years? It is apt to. In such conditions would there be any different appearance of the eye from the usual appearance? The eye is generally injected with blood and looks red and blood-shot, and sometimes the pupils are dilated.

Cross-examination by Mr. Payne. At the time of the commission of the homicide and the facts that attended it, which occurred there in the store, what is there, what circumstance is there inconsistent with the acts of a sane man acting under strong excitement, and with a powerful motive? Well, I only recollect what impressed me at the time by the description by the first witness, Cooper, that he turned and looked out of the window behind him; that he moved at only an ordinary gait down the passage-way behind the counter, and did not look at the other man but once, a single glance, it struck me as not the way in which a person acting under a passion would be very likely to act. What part was not a sane man likely to do? I did not say a sane man; I said a man acting under a fit of passion; the deliberation in which he moved down; his looking first in another direction; not keeping his eye on the object he was going to attack, was not the way I suppose persons in a passion, who are going to assault another, generally act. You don't see anything insane in that? That particular circumstance has no great weight, one way or another; there is no telling how persons will act under emotion. What was one of the acts there in the store that indicated insanity? I know of nothing but what I have stated, that would indicate

insanity, but what I have stated on the direct examination about the childish, weak character of the attack, and the striking a single blow, and dropping the club, and seizing the hands, and then running away. Suppose that blow accomplished the object of the striking down of the victim and he lay down the club, there was nothing childish about that? If he intended to commit a homicide it certainly was. State whether it is inconsistent with insanity. No sir, as I said before, it is only in connection with the whole grouping of the evidence that it could have any weight whatever. In itself alone it does not indicate anything. The laying down of the club and afterwards taking hold of him is not inconsistent with the idea of sanity? No, sir. And remaining there until pulled away is not inconsistent with the idea of sanity? No, sir. His giving a reason for striking him when he met another is not inconsistent with the idea of sanity? No, sir, that would have the contrary bearing, if any. It tends to establish sanity if anything? Yes, sir, for a conscious motive for what he was doing. And if the remark made by Proudfit in regard to his having lived through it took place at the time it did, the attack being an open one, made there in the store, that fact is not inconsistent with the idea of sanity? I don't know that I understand the first part of your question. The question asked by Proudfit as related by Hoppin, if he had lived through it, or words to that effect, and his attack made afterward as he passed out behind the counter, although openly and in the presence of another, is not inconsistent with the idea of sanity, is it? No, sir. And the attack having been made openly and in the presence of the witness, the fact that he afterwards gave to his friends his version of what transpired is not inconsistent with the idea of sanity? No, sir, taken by itself it is not. The manifestations of grief previous to that are not inconsistent with the manifestations of a sane man, are they. No, sir. Of course, doctor, there is a stronger probability of the person being insane if the taint is in a direct line, is there not, than if it is in a collateral; for instance, in the direct line of descent instead of being his cousins? Yes, sir, you bring in another element when you come to the second generation; the heredity in the case I suppose is in the direct line; the mother or cousin might bring it in. It is necessary to know something about the history of the mother and the line of descendants there? Yes, sir. And the more remote it becomes in that particular the less value it has as evidence? Yes, sir. And all that goes to show—that is the hereditary history of it goes to show—there is a liability to insanity? Yes, sir, a liability or tendency. And has no further value as evidence? No, sir, it is all hereditary except in a few instances, it is the tendency of them.

Direct examination resumed by Mr. Howland. When you go back to the father and mother in the line of heredity, if you find it in both the father and mother, on both sides, wouldn't the hereditary tendency be increased? Yes, sir. Would you judge of any insane man's act or his condition of mind by any isolated transaction? No, sir. Or even several together? No, sir, without that transaction in itself was the evident result of an insane delusion. You would want to know more of them? Yes, sir, to know what was in the man's mind.

Cross-examination by Mr. Payne. Looking on both sides of course if there is evidence of insanity in the hereditary history, that furnishes some presumption there is a liability to it in the descendants? Yes, sir. But evi-

dence of simple paralysis does not present as strong evidence? No, sir, not so strong, but yet very decided. It is evidence of nervous tendency? It comes pretty near home; I know of the death of a father by palsy at seventy-nine; one of his sons was twice insane and two of his other children were palsied. I always ascribed it that they inherited the same temperament the father had and I ascribe that to hereditary taint. How many children were there? Six other children. Nine children? Yes, sir. And one out of nine had two attacks? Yes, sir. Did they have any disease other than disease of the mind? No, sir, a diseased brain; they recovered; they were cases of cerebral congestion, only lasting six or eight months; a mania.

* * * * *

REBUTTAL.

STILLMAN COBB:

I read the warrant to Hoppin; he said his name was Edmond, instead of Edward, as on the warrant; had a conversation with him next morning; he told me of the affair in the store; he said he had given Proudfit his mail, and Proudfit said—"you've lived through it, haven't you?" then he followed him and struck him; I left him Sunday morning in charge of Walter Hughitt; didn't know that Proudfit was dead then; this was over two miles from Sterling Valley; I first learned of Proudfit's death during forenoon; Hoppin was with me; I told him of Proudfit's death when I handed him the second warrant, Monday morning; he said he had rested very well; during this time I was with him all I noticed was that he walked with his head down and didn't converse much.

Cross-examined. Sunday morning at Mr. Hughitt's he spoke of striking Proudfit; I left him alone along toward Sunday morning.

ELIAS VAN VLECK, testified:

I live in Sterling; after the blow was struck and on Saturday about 2 P. M. I asked Hoppin what conversation he had with Philip before he struck him and he said Philip came in for his mail and called him in a sneering tone by name and he could not stand it.

Dr. JOHN B. CHAPIN, being called and sworn for the people and examined by Mr. Payne, testified as follows:

* * * * *

You have heard the evidence on the part of the defense in this case, in reference to what occurred at the house of Mr. Hoppin at the time Lina was discovered at the attempted suicide? I have. And the narrative since that time of the members of the family? Yes, sir. And also the testimony of the defendant himself? Yes, sir. And his account of the transaction, of what was done at the time of the homicide? I did. Did you hear the evidence of the people of what took place in the store at the time of the homicide? I didn't, I was not in attendance on Monday. What do you say from all the evidence you have heard—you heard the evidence also in regard to

his father and grandfather and one sister and a cousin in Michigan, did you not? I did sir. Taking all you have heard into consideration as true, what do you say as to the condition of the prisoner's mind at the time of the commission of the homicide? In my opinion *he was laboring under very strong mental emotion*. What do you say as to his being insane? I could not express the opinion that he was insane at that time. Laying out of the case his account of that transaction and what he says in regard to his remembrance of it, and on the hypothesis that the motive existed which has been testified to here, that this was the second occasion on which he had seen Proudfit; that he came into the store and addressed him as "Ed." and asked him if he had lived through it, and asked also for his uncle's paper; that Hoppin handed him the paper and walked out behind the counter, nearly opposite Proudfit, and as he came to the end of the counter, raised a club, and struck him a blow with considerable force upon the head; that then he laid down the club and sprang upon Proudfit upon the floor, and held him there until he was pulled away, and until Dr. Proudfit raised the club and threatened to strike him; that he made the remark, "don't let him strike me," and then let go his hold of Proudfit and ran out of the back door, meeting his employer, Mr. Hunter, near the door, and stating to him, "Jim, I couldn't help it, he killed my mother," and soon after returned, and taking into consideration all the rest of the facts except the prisoner's account of the transaction, given upon the stand, what do you say as to his mental condition at the time of committing the homicide? I should say he was laboring under very strong emotion and passion. As to his sanity or insanity? I could not express the opinion that he was insane.

The Court. Do you mean by that that you do not see evidence to compel you to that opinion? Not sufficient evidence to establish a condition of insanity.

If he had been insane at the time would you have expected evidence of insanity to have followed from that time down to this, at intervals? I would have expected evidence of insanity to follow, but not necessarily to this time. You would have expected some subsequent evidence of insanity, between that time and this? I would. Do you see anything in the history of the case prior to the homicide inconsistent with the actions of a sane man, with his temperament, placed under these circumstances? Well, I think I do. What is it? That involves going somewhat into the case as it presents itself to my mind. I don't care to ask that? I will add to that answer that on the assumption that this prolonged depression which seems to have been real here was founded upon a fact—upon a cause capable of exciting that condition in a sound mind, it would be explainable; if that cause was inadequate and did not exist, it would involve a condition of insanity or a suspicion of insanity. Then you mean to say that throwing out of the case the cause of the disease, if that did not exist in his belief, that the long depressed condition would be evidence of insanity? It would be evidence of a change of a suspicious character, and in that direction. But taking that fact into consideration that he did believe in that state of things; that he had credible evidence to that effect, and no evidence to the contrary; that all these causes did exist; I should then say that the condition which is described would be accountable on the supposition that the man was a sane man, but of a highly sensitive and emotional character; different persons would receive such in-

telligence as he received, differently, but I think the conditions presented here to the defendant's mind are consistent with what might be expected in his case to follow the various experiences he had during the last few years. Taking that into consideration you think it entirely consistent with the actions of a sane man? I should prefer to answer as I did before; I could not express the opinion that insanity existed.

Cross-examination by Mr. Howland. Would you want to hazard an opinion if it did not exist? If he was a private patient of mine and I was called upon to give a certificate I could not consistently do it. You would say he was not insane? I see no sufficient grounds to express the opinion that insanity existed. You see no evidence or symptoms of insanity? I see some suspicious indications. What are those suspicious indications? Depression. In what particular? Melancholia, and the depression spoken of and the weeping might be symptoms of insanity. Anything else you remember? The sleeplessness, a want of ability to sleep, and some indication of an impairment of the power of attention, but whether that was natural or the result of this condition I could not state. Anything else you recollect you have heard in the testimony that is suspicious? Well, I took no other prominent symptoms; there was one suspicion that was suggested to my mind there might be a delusive idea in the mind of this man. What was that? The defendant announced *in his own testimony*, and I think it was testified to by others, the apprehension he felt of the return of this person, and the object of his return to harrass and annoy him. What did that show? It showed if this person formerly believed that and acted upon it at the moment of the homicide, there would be a strong connection between the delusive idea and the act itself. If he believed this man was coming back to annoy him? Yes, sir. That would go to show that in that respect——? If there was no evidence to establish the fact that he was not coming back for that purpose, and nothing to lead him to believe he was coming back for that purpose, but I do not think it is sufficiently brought out. Would it be a circumstance to your mind to show there might be a delusive idea there? I can not say any more than it creates a suspicion. Wouldn't you regard it as something of a delusion of the mind if there was no accounting for it? Well, I think all that can be said is it might create a suspicion. Suppose he had that firmly fixed in his mind for three or four weeks before this happened, having heard this man was coming back there, and having passed through all these scenes that have been related here, and being enfeebled in health and strength, and impaired in intellect to some extent, as shown here, and he forms the idea without any real foundation for it; that that man is going to return there and injure him, and annoy him and hurt him, would that be a delusion? I think it might become fixed in the mind of a person. And might it not become a chronic idea, an abiding fact in his mind? It is possible, quite possible, in the state of mind this man was reputed to have been in. Did you hear the testimony of Mr. Hunter in regard to his figuring at that time? I did. About making false entries and misstating them? I did, sir. Would that be a suspicious indication, or raise a suspicion that his mind was not right? No, sir. Isn't that laid down as one of the——as a very strong symptom of an insane mind, that is, where a person has been accurate in figures all his life and becomes inaccurate, or he does not make accurate entries, and when he is called upon subsequently he can not do it, and

seems to have no memory on the subject, would that be suspicious? The memory of some persons depends very much upon the attention they give to a subject; if this prisoner's attention was directed in another quarter it would explain, I think, the circumstance mentioned by Mr. Hunter. But suppose his attention is called to it and he undertakes to do it, and tries to recollect and explain, and is unable to do so from an apparent want of memory, what would you say? I could not answer that. Is it laid down in your approved authorities as one of the symptoms? What is laid down? That fact? Do you mean loss of memory? No, sir, not loss of memory, but take an act occurring within a day or two, where a man has made entries in a book, and, for instance, entered a pound of tea and carried out the price ten pounds, and on several occasions it occurred, and when his mind is called to it by his employer, on the same night probably, he tries to straighten it and can not do it, and can't explain it? It is laid down as a symptom of dementia, as a symptom of paralysis and other forms of disease which this man did not have. Of mental disease? Other forms of disease. Is it laid down as evidence of insanity? Yes, sir, forms of insanity. What form of insanity would you say that would be evidence of? Advanced dementia and general paralysis, and there may be other forms; I could not state, it has certain characteristics of those forms. Would it be a manifestation of a weakening mind? It would be an indication of a very advanced state of deterioration. Would it be an indication of a weakening mind? No, sir, it would be an indication of an advanced state of disease. Of what disease? Dementia and the disease described in the books as general paralysis. Of any other form of insanity, would it be evidence of any other form? It depends from what this condition arose; if it was want of attention it might be a first indication of acute mania, when the person paid no attention to business, and might have been an indication of different diseases where the power of attention might be utterly broken down. Isn't it hard to separate the symptoms applicable to one form of mania from other forms of mania, do not the same symptoms run through all forms of mania? I think there are some symptoms that do. Doesn't this symptom run through all forms of mania? I think it does. Do you say a person troubled with an insane mind would not be interfered with by this symptom? I have known insane men to conduct business for years. And they are sometimes expert mathematicians; they retain their former usual qualities in that respect? Some do and some don't. Some will compose very readily articles on scientific subjects, and very difficult articles? Yes, sir. And write very valuable articles, will they not? Yes, sir. When they are insane and labor under some forms of mania? Yes, sir. Do you recognize different forms of insanity, different classes? I recognize different manifestations of insanity; I do not recognize that they are distinct forms of disease. May not a person be insane upon some particular subjects and sane upon others? I doubt it, sooner or later they will break down generally; a man's case don't close until he dies. What would you call it when a man appeared to be insane upon one subject and rational upon all others? I should say he might have delusions and might be insane; *I don't believe in the existence of monomania*. You don't believe there is such a thing? No, sir. You don't believe a person can be a monomaniac on one subject and the rest of the faculties not involved? No, sir. You think of the brain as an entirety, and that an affection of the brain affects all the facul-

tics of the man? That is my belief. Is that a doctrine laid down in the books? Some do very decidedly; I think for the convenience of the subject certain manifestations are classified, and the idea is sometimes gathered that those classifications mean distinct diseases, when the authors do not convey that idea. Do the authorities convey the idea that some persons may be insane upon one subject and not upon others? I think there has been such a division made of insanity. So far as the manifestations of insanity are concerned? I don't think that view is the generally accepted view of the profession. Can you mention any author that does not accept it as a correct view? Well, if you will state any author that does you must establish in the first place the existence of your proposition; I will mention Dr. Gray for one. Dr. Gray of Utica? Yes, sir, I think he has been mentioned as an author, as the editor of the *JOURNAL*. Does he accept that as a settled fact? He does. That there is no such thing as monomania? He does. What I want to know is whether those manifestations of the disease are not laid down as distinct forms of mania by the authors? If you mean distinct forms of disease. Yes, sir, called monomania? I don't understand they are, I understand insanity to be a disease, or certain manifestations; these manifestations are sometimes classified, and when persons have delusions in a particular direction, the authors for convenience, have sometimes described those delusions as meaning a certain disease: if a person has a disposition to homicide, that form has been described as homicidal impulse, or homicidal insanity, but I do not recognize any such form of disease. You recognize such a form, the manifestation of disease? That is a different thing. Do you think that? I recognize certain patients have certain delusions, in certain directions. Take a person like this, with indications of homicidal mania, and no other indications of an insane mind, what evidence have you that his whole mind is involved? A man proceeds to execute a homicidal purpose as the result of some delusion, and behind that there is the action of the understanding and mind and judgment, and he simply sets his will-power to the execution of his purpose as clearly as any in a state of health proceed to execute a purpose; there is no more mystery about it than in the case of one in health. What evidence have you got that that man is insane upon other subjects if he don't manifest it? Well, persons proceed in a state of health to execute certain purposes; there is the understanding of the mind and judgment, and then again we have the will-power to bring about or accomplish the purpose, and so in a state of "homicidal impulse" the person may have a delusion—they always have some delusive idea and proceed to execute the purpose by the will-power. Take a person who simply executes a homicidal mania, and if that is all he manifests upon that subject you would find him rational in regard to his other acts? I don't think you would; I might not discover anything upon examination. Then he would manifest it in all other acts? I wouldn't expect him to be rational in all other respects. If there had been no cause for Hoppin's dejected spirits, his troubles and weepings and strange actions, if no adequate cause appeared for it, then you would say he was insane in doing it? That would be a strong presumption. Wouldn't you almost come to the conclusion he was insane? I think I would. Does insanity come from some cause, some real cause sometimes? It very generally does. It generally does? Yes, sir. Wouldn't these things be an adequate cause to produce it even they were real? Well, I would say

in answer to that, that domestic trouble and grief are frequent causes of insanity; whether in any particular case it would produce insanity I am not able to state. You can say it might produce it? I can. Would continual sorrow, and brooding over any particular subject, even if real, would it tend to that result in your opinion? It would tend in that direction. And would it be produced or brought about by the agencies described here by the other physicians, this cerebral congestion? I could not say about that. Wouldn't it be quite as likely—wouldn't a man be quite as likely to become insane by brooding over a real cause of trouble as over fictitious ones? I think not. You think it would be less liable to produce a bad effect upon his mind? Yes, sir. The subjects you have under your care and make a specialty of, are confirmed maniacs? They are, they are cases of longer standing as a rule than one year. And incurable? Very few are expected to recover; probably not fifteen in the whole number will recover. You have but little to do with patients in the incipient stages? Very little in the asylum. These men brought under your care, do they have much of any medical treatment? They do, every patient is visited every day by a physician. Do they have treatment? If they require it they receive it. They do require it? They do, a large number of them. Do you attempt to treat them excepting their physical condition?

The Court. That is all they ever attempt to treat them.

What do you say about the subject of hereditary taint or tendency? That is a very strong predisposing cause. Isn't it considered one of the strongest causes? I think the most frequent; that is my judgment, it is the most frequent. And, of course, there would be no difference what form of insanity the ancestor had, it is all the same thing? No, sir. Would that be one of the first things you would look for in a case where you were not perfectly satisfied from the appearance of the party—would that be one of the first things you would look for? If there was any doubt about the case it would be the first inquiry I think. Can an insane person, or what you call an insane person, control the will-power, control the will? That is pretty general; we say the will is impaired. Could you say as strong as that, that they could control it? Yes, sir, they do control it, the whole discipline of the asylum is on the power of the patient to control it. It is by acting through their rational qualities you control them? Yes, sir, through their power of self-control. Do you recognize the fact that an insane person can not control his will-power, in any case? We all recognize that. Now, how soon would you expect to see a return of insane spells upon a person who committed homicide, about what interval would occur? I could not answer that question. Is there any definite rule? I could not answer any question of that kind; I don't think the question admits of an answer. You said as I understood you, you would expect to see something of it? I didn't say so; I said there would probably be some indications of mental disease; I intended to so answer. You think there would be some? I do. So, of course, as to any definite time there would be no definite rule? I should expect it to continue right along. Is it not laid down in the books, and is it not a fact that persons will have manifestations of insanity and get over it, and sometimes go a year or two and then have a return of it, or even two or three years? Yes, sir. That is not uncommon? No, sir. And will not the time in which a recurrence of these insane spells come upon them depend a

good deal upon their condition in life and surrounding circumstances? I think it will. And be controlled almost entirely by that? I could not state what influences bring about those attacks; they do return.

Direct examination, resumed by Mr. Payne. You would expect to see some other insane acts following the commission of the homicide, would you not; assuming the patient was insane? Yes, sir, I would. And you would expect the insanity would last for some length of time? I don't think there would be any rule about that. It is what you would expect ordinarily? Yes, sir, a continuation of the disease. The force of any hereditary tendency would depend very much upon whether there was a local disease that caused the insanity in the ancestor, would it not; in other words it would depend whether it was the delirium of fever, or whether insanity was the only disease? The delirium of fever would have no influence whatever, it would be an insignificant circumstance bearing upon insanity. You heard the evidence in regard to the grandfather of this defendant? I did. Was there sufficient evidence there for you to predicate an opinion as to whether he was insane? I should say not sufficient, but I should think he was an eccentric person at least, and it might have been more; I do not know that it appears that he was carefully observed; I think there was sufficient to establish that element in his character.

Regarding the two vital issues involved in the trial, the learned Judge charged the jury, as follows:

* * * * *

The first question for you to decide is:—was that death caused by the prisoner at the bar? It is proved, and not controverted, that at three o'clock in the afternoon, on the thirteenth day of July, about thirty-six hours before the death of Proudfit, that he was struck by the prisoner, a blow which has been described, and the effects of which are now in question. It was a blow with a base-ball club upon the fore part of the head, and possessed of force enough to fell him to the floor. It did not render him unconscious, or only momentarily so, for he struggled to rise, and as soon as permitted by the prisoner, he did rise, spoke intelligently, and walked, without assistance, to the office of his uncle, where his wounds were dressed. You remember, distinctly, the narrative of the progress and development of the disease which resulted in death. The immediate cause of that death, as disclosed by the evidence of the post-mortem examination, was the formation of a coagulum or clot of blood extravasated within the cranium, between the skull and the dura-mater, which is the outer membranous covering of the brain. This extravasation of the blood produced compression upon the brain, and this caused the death of the patient. The important question for you, gentlemen, upon this branch of the case is:—was this extravasation of blood, which resulted in

the formation of this clot, which produced the compression on the brain, which caused the death, the result of the blow inflicted by the prisoner at the bar? I shall not dwell upon this question. You will remember it, and it has been fully and ably commented upon by the counsel on either side. The rules of law applicable to this question are simple. The homicide is to be attributed to the prisoner at the bar if death was the result directly or proximately, of the blow which he struck; if the death would not have resulted but for the physical efforts of the blow—no matter what act of imprudence the patient committed—the homicide is still attributable to the prisoner. The law is not so unreasonable as to tolerate the proposition that a murderer, or one guilty of murderous assault shall escape the consequences of his crime, if he can show that his victim, after passing through his hands, fell into the hands of blunderers or had incompetent surgeons. There is no question of malpractice in this case; if the blow was either necessarily fatal, or had, in itself, fatal tendencies, and the death resulted from the development of these tendencies, by no treatment of the case, however negligent or unskillful that treatment may have been, the death is in the law attributable to the blow. But, if on the other hand, the blow was not itself necessarily fatal or of fatal tendency, and the death was produced wholly by the surgical and other treatment and other cause, independent of the blow, then the death is not attributable to the blow nor the homicide to the prisoner at the bar. This question which I have attempted to define with such particularity, you will decide reasonably upon the facts of the case. Have you a doubt, an honest, reasonable doubt, under the circumstances shown, that the blow struck, the force of the blow demonstrated by the immediate effects, the resultant coagulum or clot of blood in the head, in almost, if not quite, the immediate region where the blow fell on the skull—all circumstances which are proved here—have you a doubt on the question whether this extravasation of blood was due either directly or proximately to the striking of the blow by the club in the hands of the prisoner at the bar? If you have this reasonable doubt about it, that ends the case and your verdict must be an acquittal.

In this case you have the experience of experts; they are persons, who, by reason of study and experience in any particular art or science, attain a knowledge beyond that possessed by men ordinarily, and in view of this special wisdom and experience, they are permitted, contrary to the general rules of evidence, to

express opinions on the stand as witnesses. Their theories are of no value whatever. A mere theory is not competent evidence for a jury, and if it comes out in the case it should be dismissed from the attention of the jury in considering evidence. But the opinion of a man specially skilled in a particular art or science, is permitted to be given for the information and enlightenment of the jury, and for no other purpose. These opinions are not decisive, but are received as I have said only as aids to the jury in forming their own opinions.

The Judge then gave an exhaustive definition of the various degrees of murder and manslaughter, and proceeded as follows :

But, gentlemen, the defense in this case is that this person, when he committed the act of homicide with which he is charged, was not a reasonable and accountable being, and, therefore, unaccountable by reason of insanity. The law holds to criminal accountability only reasonable beings, capable, not only physically, of the act charged, but of judging of the moral quality of the act, and intending to perform it. There must be as a condition of accountability, consciousness of the act performed, and ability to judge of the moral quality, whether right or wrong. Any insanity, from whatever cause, must be such as to deprive the subject of one or the other, or both of these requisites of accountability, or the subject remains accountable. The varieties of insanity may be said to be infinite, down to absolute dementia and imbecility. It has even been said and become in ancient times a proverb, that no man is always sane, and it may indeed truly be said that there are few men living, or who have lived, who can boast of an absolutely, perfectly sound brain, any more than of a perfectly sound physical constitution in any other important particular. If this is so, it is clear that it is not every case of unsoundness of mind resulting from some diseases of the brain, which shall excuse men and hold them unaccountable for a crime.

If this were so, the laws against crime could scarcely be enforced, by reason of this defense of insanity. It is only such unsoundness, then, or insanity, as deprives the agent of the consciousness of the act which he performs, or which renders him incapable of judging whether the act is right or wrong. If you will bear in mind this instruction you will find that it furnishes solid legal ground upon which to stand, and that it is the rule by which your decision must be governed.

Take up the question then in this way: was he conscious of his act when he struck the blow which is alleged to have caused the death of Philip H. Prœudfit? Upon that question you will consider all the evidence in this case which bears upon the condition of the mind of the prisoner when the blow was struck. Any evidence going to show anything likely to overthrow the mind and destroy his mental balance, or deprive the moral sense of the power to judge right from wrong, give it careful attention and due weight.

Upon the question whether he was actually conscious when the act was performed, the evidence he has given is entitled to consideration, and also the character of the man and the attendant circumstances.

Upon the question of the prisoner's capability of judging of the moral quality of the act at the time he struck the blow, his honor charged that—

Sanity to the extent of accountability is the normal condition of men, and no presumption of insanity exists; yet, when any evidence is given in the case which tends to raise the question of such sanity, or suggest the inquiry or the suspicion whether the prisoner at the bar was sane or insane to the extent contemplated by the definitions I have given you, at the time of the commission of the act, it then becomes the duty of the prosecution to establish such sanity like every other material point in the case, beyond a reasonable doubt. Of all such doubt the prisoner is entitled to the benefit, but this doubt must be a reasonable one, from the facts in the case, not an unreasonable or speculative doubt; such a doubt as a reasonable man will entertain and permit to control his own action in regard to matters of importance to himself; an honest doubt, not one devised for the purpose, to justify one's own conscience in a particular course. I have said it is not every impairment of the mind which deprives of consciousness, or a sense of right and wrong, yet there may be a degree of impairment not sufficient to relieve of criminal accountability, yet sufficient to modify the degree of responsibility.

In reference to the injuries which it was alleged the prisoner had received at the hands of the deceased, the learned Judge stated, that revenge constituted no excuse

or justification for crime of any kind, and characterized, in the clearest terms, as subversive of all law, any attempt to take the punishment of offenses into private hands. He further informed the jury that the only relation, in law, the alleged injuries could have to the case, would be their effect upon the mind of the prisoner.

The jury then retired and, after deliberating for three hours and twenty minutes, returned an unqualified verdict of "not guilty." This announcement was followed by a scene of joyful excitement and confusion, seldom witnessed in a court of justice. Notwithstanding the positive orders of the Court to suppress all demonstration, the anxious crowd of spectators and friends of Hoppin gave vent to their feelings in a spontaneous outburst of cheering, tossing of hats, and grasping of hands. Miss Turner, Hoppin's betrothed, uttered a scream and fell into his arms, both being quickly surrounded by excited friends and spectators, who vied with each other in offering congratulations. The verdict met with almost universal approval on the part of the public; now and then a person would argue in favor of a minor degree of manslaughter, but a recount of the trials borne by the family, the ruined sister, the hastened death of the mother and the previous good character of the prisoner, stamped the case, in the public mind, as one of the most aggravated on record.

The closing scene in this dramatic chapter of young Hoppin's life savors of both comedy and tragedy, and may be described in a few words. Upon the adjournment of the court the acquitted and his betrothed, together with their immediate friends, were tendered a collation by the sheriff, after partaking of which, the young couple repaired to the house of Dr. C. L. George, physician to the jail, where they were married, the wedding-guests consisting of "friends, sheriff and his officers,

jailors and the twelve jurymen, who a few hours before held in their hands the fate of the bridegroom."

From the evidence it will be seen that there was substantially no difference of opinion, on the part of the three experts respecting the prisoner's mental condition at the time of the homicide. None of them were able to recognize the existence of insanity, although they were obliged to admit, upon the hypothetical questions submitted, that there were, in the language of Dr. Chapin, "some suspicious indications" of the disease; and it is possible that the recognition of these suspicions was regarded by the jury as sufficient to warrant them in entertaining an "honest doubt" upon which, in accordance with their instructions from the Court, they were bound to acquit the prisoner. Discarding the hypothetical questions, the case can not be said to have furnished any sufficient evidences of insanity. All the experts were agreed that the condition of the prisoner, as described in the evidence, namely, sleeplessness, impaired appetite and loss of flesh, accompanied by depression of spirits, mental abstraction, amounting at times to absent-mindedness, inattention to his business affairs and frequent manifestations of grief, was such as would be likely to arise in an individual so keenly sensitive, as was Hoppin, and who had been so long subjected to trials of the nature of those endured by him.

Inasmuch as the verdict of the jury was simply "not guilty," without any word or qualification or intimation respecting the grounds upon which their decision was based, it may justly be assumed that such decision did not rest upon the ground of insanity, as in that case they would have returned a *special* verdict to that effect. The best explanation, in the absence of any intimation from the jury respecting the reasons by

which they reached a decision is, that, partaking of the sympathy for the prisoner, which was so prevalent in the community from which they were drawn, and moved by the eloquent pathos of counsel representing the prisoner as really the most ill-used and unfortunate party in the transaction, they, in accordance with Beccaria's doctrine that "crimes are only to be measured by the injury done to society," naturally seized upon any and every circumstance in the case, offering even the slightest grounds for extenuation.* At all events it is evident that the jury did not regard the prisoner as meriting punishment *under the circumstances*, and their decision is as near an approach to this conclusion as the law permits.

Doubtless very grave objections may be offered to the acquittal of *sane* persons who are proved to have committed homicide; but it is not the object of this paper to attempt a discussion of that branch of the case, as it would open up a wide and perplexing question respecting the line between crime arising from *criminal* passion, and a criminal act done under the influence of "great mental emotion" or the "brief madness of anger," originating in an innocent cause, although the evidence warrants the conclusion that the rash act of Hoppin clearly belongs to the latter class, or, in other words, that it was not the result of criminal thought or deliberation, but on the contrary the instant expression of a "great mental emotion," induced by the sudden appearance of the author of his affliction, and intensified by the sneering remark of Proudfit, "you've lived through it, haven't you?" What a world of meaning was conveyed to Hoppin's mind by that little word "it." In the eloquent language of counsel it

* It is said that at first two of the jurymen were in favor of a minor grade of manslaughter, but that they finally yielded their convictions on this point.

meant, "you have lived to see your sister ruined, disgraced forever by me; you have seen a mother die by my hand; you see my illegitimate child passing in and out before you, the child of my sin and crime, constantly reminding you of your sister's shame; you have lived *that* through, and the trouble and grief you have had upon your mind for two years, *you* have lived through it."

When we reflect that here was the sudden application of a great provocation, the very nature of which is calculated to arouse and put in action the furious passion of intense anger, especially when operating upon a naturally emotional nature, it is not necessary to resort to the department of *morbid* psychology for a satisfactory explanation of the act. The function of the medical expert in dealing with an act of this kind is, to determine, not whether the impulse was uncontrollable or *uncontrolled*, but whether it was the offspring of uncurbed passion, or a manifestation of disease.

In the case before us it is impossible, by any method of reasoning upon the evidence, to arrive at the conclusion that it was "an *insane* impulse, and uncontrollable in the sense in which the impulses of an insane man are beyond his control." On the contrary, the whole history of the case points to the conclusion that his disturbed mental actions never reached a state of insanity, and that, in all probability, he never would have committed the act, had he not been overcome by an angry passion which, for the moment, suspended the judgment. It is admitted that violent passions do deprive the individual of the power of deliberately taking into account the terrible consequences of his fury; and the law-makers, recognizing this fact, have wisely established degrees of murder.

An important element in this case is the fact that *the violent emotion subsided immediately after the accom-*

plishment of the act. Dr. Gray, in his report of the case of Dr. Wright, under commission of President Lincoln, says:* “Latent insanity, suddenly appearing in the manner mentioned, does not instantly disappear with the accomplishment of the violent act, as it has done, if it existed, in the present instance.”

Respecting Hoppin’s mental condition *before* the homicide, it can hardly be said that absent-mindedness, inattention to business affairs, and depression of spirits, necessarily imply the existence of insanity. It is evident that his employers, with one of whom he boarded, did not regard him as insane, as otherwise they would not have continued him in full charge of the store and post-office; it is also quite likely that the young lady to whom he was engaged did not consider him as insane, for had she thought so she naturally would have taken some measures to free herself from the evil which her womanly instinct would have suggested was in store for her, if she married a lunatic. That his companions in the village did not think him insane is evident from the fact of his having been chosen by them to umpire a game of base-ball *four* days prior to the homicide. There was no pretense that he continued insane *after* the fatal act, and surely the fact of a person killing an individual against whom there existed a real cause for enmity offers, in itself, no evidence of insanity. And, finally, the opinion of the twelve jurymen, upon the question of insanity, was not only indicated by their verdict, but was expressed in no uncertain manner by their attending the wedding of Hoppin, in a body, two hours after their verdict was rendered.

It will be observed that the case of Hoppin resembles, in several important particulars, that of Pierce, who was tried for slaying the seducer of his sister, in

* See AMERICAN JOURNAL OF INSANITY, Vol. XX, p. 299.

Niagara County, N. Y., in 1871. Pierce, it will be remembered, was defended, and acquitted, on the unscientific theory of "mania transitoria." The points of resemblance are the following: an inherited neurotic tendency from both direct and collateral sources; "the high moral tone of the prisoner's character;" "the absence of malicious, vindictive and querulous habits;" his marked affection for his sister; the seduction of the sister under promise of marriage; the intense grief of the prisoner on learning from his mother of his sister's condition; his unsuccessful efforts to induce the seducer to marry his sister; the prisoner's arrangement for his own marriage, made only a short time prior to the homicide; the sudden outburst of fury, occasioned by a taunting remark of the seducer; the prisoner's remembrance of all the circumstances up to the moment of the act, and his declaration that following this there was a blank in his memory for a certain length of time. Hoppin's counsel was so thoroughly impressed with the striking similarity of the two cases, that he determined to continue the parallel by interposing the plea of "transitory mania," as one arm of the defense. This proposition was opposed by the writer on the ground that the terms "transitory" and "instantaneous mania" are contrary to the principles of sound psychology, and whose only use is to open a door through which the guilty may escape from justice; that they are terms coined by certain writers in their attempts to describe that which has never been observed, and which, in fact, can not be proved, and rests only on assertion.

The unfortunate introduction of these illogical, misleading terms into its nomenclature, has done much to retard the progress and impair the usefulness of psychological science, as well as to foster the grossest abuse of the very proper plea, insanity, which has often

encountered prejudice and bitter opposition when legitimately offered in behalf of an irresponsible being.

The time has arrived when it becomes the duty of the medical profession to set its face in opposition to the further progress of these chimerical, fallacious dogmas of "transitory mania," and "homicidal impulse," and to make some effort to eradicate from the public mind the false ideas which now pertain respecting the manifestations of mental disease.

In concluding this paper we feel bound to express the belief that more harm has resulted to society from the confounding of wickedness and crime with disease, as the result of the recognition of the doctrine of "transitory mania," "moral insanity" *et id omne genus*, than those who originate or encourage such doctrines would be willing to admit.

RESTRAINT IN BRITISH AND AMERICAN INSANE ASYLUMS.

For some years past the increased public interest in the care of the insane, and the earnest and thorough discussion of the subject by the Association of Medical Superintendents of American Institutions for the Insane has resulted in great good; first, in laying down sound principles for the construction, organization and management of institutions, and second, in securing in the various States such legal enactments as will better insure the interests of the general public, and the welfare and rights of the insane.* In the State of New York the laws relating to the insane have received the most careful revision and codification, and this, with the establishment of a State Board of Charities and a Commissioner in Lunacy, leaves little, if anything, further to be desired. Very naturally the discussion has brought to the surface persons who have had little or no practical experience with, or knowledge of, insanity and who are not connected with asylums, who have been agitating *themselves* on the management of asylums, and particularly with reference to the views of the Association of Superintendents. They have appeared in letters, in pamphlets, in reviews of these pamphlets and in analyses of these reviews, in anonymous editorials, &c. Where the assumed knowledge has been obtained and what the animus may be does not concern us. We have not undertaken the criticism of this literature, adopting the views of

* The propositions in regard to construction, organization, &c., as well as the "Project of a Law," were published by order of the Association, in pamphlet form; 1876.

Sir Henry Holland: "The time and temper of the physician are both grievously wasted if submitted to controversies, utterly useless, where ignorant asseveration takes the place of that evidence which alone can establish a medical truth." However, when an attempt is made to influence legislation by ungenerous and unwarranted attacks upon the management of institutions, it is only proper to give the public the facts. The latest phase of these assaults is an anonymous editorial in the *New York Herald* of March 23, 1878, as follows:

INSANE ASYLUM MISMANAGEMENT.

The subject of the mismanagement of the insane asylums of this country, and the cruelties and unscientific treatment to which their inmates are subjected, have finally compelled the attention of physicians and others not directly connected with such institutions. At a recent meeting of the Medico-Legal Society of this city—a society composed of the most eminent members of both the medical and legal professions—the subject of asylum abuses was fully debated, with special reference to the asylums of this State. In the course of the evening the *assertion* was made that the insane asylums of this country are among the worst, if not the very worst, in the civilized world, and that, instead of improving, they are actually falling off year by year from the comparatively high standard of a few years ago. Thus, *within a short period* a measure of personal restraint has been introduced which equals in horror anything used in asylums before Pinel and Conolly undertook their reformation, and in which a wild beast could not be humanely confined. This is a crib, made after the pattern of a child's crib, but with a barred lid to it. Into this cage the poor lunatic is put, and the top is shut down and locked. The consequence is that the sufferer is compelled to occupy the recumbent position, for the space between the body and the lid is not more than a few inches. Think of being shut up for days and nights at a time in an apparatus like this, and think what must be the consequence to an already *congested brain* by a position which tends still further to increase the disease! This whole subject of bodily restraint needs overhauling. *It is not allowed in Great Britain at*

all, and the asylum superintendent who should put one of his patients into the Utica crib, as it is called, or muffle his hands in a strait jacket, would certainly lose his position in twenty-four hours, if he did not incur more severe punishment.

Let the asylums be investigated. If they are in good condition and well managed, so much the better for those who control them. If they are as bad as they are said to be, the sooner the public knows the fact the sooner the proper remedy can be applied. At any rate it is creditable to New York that the inquiry is to begin here.

A memorial was presented to the Legislature, on the 25th of March, and a resolution offered for an investigation, which was laid on the table and has not since been taken up.

We do not propose to enter, at this time, into a discussion of the general subject of restraint as employed in asylums,* or to make any remarks touching the humane character and management of these institutions; the literature is abundant, and the institutions speak for themselves. The ignorance manifested in the above editorial is sufficient to carry the refutation of its statements to the mind of any one, at all familiar with the literature of the subject, even though without personal experience. While restraint in the care of the insane has been deemed necessary, and used by all nations at all times, the *modes* of restraint have properly been subjects of discussion and earnest thought by those having direct care of institutions, or official relations to them. In Great Britain it has been proposed by some to abolish certain forms of mechanical appliances, restraining the hands by leather muffs, camisoles, mittens or simple leather wristlets attached to a belt around the waist, &c., and to use

* See AMERICAN JOURNAL OF INSANITY, July, 1877, *Mechanical Protection for the Insane*, by Eugene Grissom, M. D.; and October, 1877, *Discussion on Restraint*.

instead of these the direct application of manual force by the hands of attendants. For the general restraint of the patient, the three following methods have been adopted—bed-straps, the crib-bed and forced seclusion in a padded room.

The crib-bed was devised in France by Dr. Aubanel of the Marseilles Lunatic Asylum, in 1845, and described in the *Annales Psychologiques* for November of that year. This bedstead was introduced into the Asylum at Utica, by Dr. Brigham, in 1846, and described as “made in the form of a *bunk* with a convex lattice work covering it, and fitting evenly to the margin. This is of such a height as to allow the patient sufficient freedom of motion; it is affixed by hinges to one side of the bedstead, like the cover of a trunk, and is fastened at night by two clasps on the opposite side.”*

Dr. Wm. Wood, medical officer of Bethlem Hospital, England, describes a similar bed which he calls the enclosed bed, of which he gives a drawing, in *Winslow's Journal of Psychological Medicine*, Vol. V, 1852.

The principle of this bedstead, then, is that of a crib with a lid to it, the inside being padded; the bedding being either the new bed which I have described above, or ordinary mattresses, the lid consisting of a net-work of webbing without any woodwork projecting over the patient as he lies in bed, and being at a sufficient height from the top of the mattress to allow of free movements by turning from side to side, without touching the cross-webbing of the lid.

In 1854 the bunk, or Aubanel bed, was abandoned at Utica, and one constructed, modeled after the pattern described by Dr. Wood, with this modification: the sides were made with rungs like an ordinary child's crib instead of with boards as the English bed. This bed, as now employed, is thus described in the eighteenth annual report of the New York State Lunatic

* For full account, see AMERICAN JOURNAL OF INSANITY, October, 1846.

Asylum, 1861: "This bed is constructed like an ordinary child's crib, with the addition of a slatted cover. This arrangement does not interfere with the movements of the patient in rolling from one side of the bed to the other, or moving the limbs in any way; it merely prevents the patient from sitting up or getting out of bed. As the sides and top are open, the air circulates as freely about the patient as in an ordinary bed. Restraint, in a horizontal posture, is used in cases of exhaustion, when the physical health of the patient demands that he be kept in bed; the medical thought involved is readily appreciated. Sick people ordinarily lie in bed under the advice and direction of the physician, but the same class when insane, will not always do so, and these arrangements are to effect this end." The bed-strap has long been discontinued in the asylum at Utica, and padded rooms have never been used.

In the *Edinburgh Medical Journal*, October, 1868, in an article on Typho-mania, Dr. Lindsay speaks of the—

Use of the "Protection-Bed," otherwise variously known as the "*Box-bed*" or "*Locked bed.*"—Where there is danger from the exhaustion consequent on the simple effort to get out of bed, or the scarcely less immediate risk from exposure to cold—where, moreover, the patient has an uncontrollable propensity to get out of bed and expose himself to falls and to cold—there is no arrangement comparable with the bed in question. It is simply a bed with a lid—to be locked or not as the case may require. It may thus be rendered impossible for the patient to get up or out thereof without permission of his attendant. Its use renders him quiescent for the time, while it maintains warmth and does not prevent free ventilation. I have repeatedly tried it in various forms, and have no doubt as to its having prolonged several lives, and prevented many accidents, that would have been sacrificed, or that would have occurred, under the customary arrangements of many or most other asylums. Such is my opinion of its usefulness, that I think it should find place not only in every lunatic asylum, but in every general hospital; for I remember the difficul-

ties that used to occur in (*e. g.*, the fever and delirium tremens wards of) the Royal Infirmary of Edinburgh, and the impossibility of dealing with occasional patients otherwise than by mechanical restraints of the nature of strait-waistcoats and strappings to bed. Unfortunately for its usefulness, however, the box-bed is somewhat unsightly; while many asylum authorities, who do not consider confinement in an asylum or a bed-room "restraint," inconsistently place in that category an appliance which differs only in *degree*, not in kind; they prefer apparently to give a blind adherence to a principle, which, however good in proper time and place, may be, and is sometimes, carried mischievously to an extreme, rather than, independently of all other considerations, to regard what is the best treatment in and for the case of each individual patient. The "Protection-Bed," so called by Dr. Browne, Commissioner in Lunacy for Scotland, was for many years by him employed in the Crichton Royal Institution (for the Insane) Dumfries,* where it is still used by Dr. Gilchrist; by whom, further, it was also employed in the Royal Lunatic Asylum, Montrose. Dr. Robertson, of the Town's Hospital, Glasgow, who has lately visited the United States, informs me that the said bed is extensively used in the lunatic asylums of that country; and the fact that it is so used by physicians so advanced, amidst a people so enlightened, as those of America, seems to me a strong argument in favor of its presumptive usefulness.

In the *Edinburgh Medical Journal*, February, 1878, appears the following article, to which we invite the attention of our readers. In our next issue we shall continue the general subject of restraint:

The Protection-Bed and its Uses. By W. LAUDER LINDSAY, M. D., F. R. S. E., Physician to the Murray Royal Institution, Perth.

In all classes of hospitals, public and private, and in all ordinary dwellings that are for the moment, by the

* It is worthy of note that this appliance (which offers the best treatment in certain exceptional cases, and which treatment is thereby, in these cases, the most humane and enlightened, whether or not the bed in question is to be considered a form of "restraint") has been and is used in those institutions in Scotland, which are distinguished for the extent to which they have developed the (absurdly so-called) "non-restraint" principle.

illness of some of their occupants, converted into hospitals, there are every now and then patients whom it is most desirable to keep comfortably and safely in bed, and whom it is difficult or impossible, with ordinary appliances, to nurse or treat properly, unless they are prevented leaving bed at undue seasons or under unfavorable circumstances. There are, for instance, helpless patients—such as *epileptics* and *paralytics*—who are apt to fall out of ordinary open beds that have no means of protection at the sides; and the result of such falls, in the absence of nurses, say, during the darkness of night, may be either dangerous bruises, fractures, dislocations or other injuries, suffocation, or the setting up of rapidly fatal acute inflammations from exposure to cold. Then there are persons laboring under the various kinds of *delirium*, who, eminently, but aimlessly, restless, are perpetually getting out of ordinary beds and wandering about their apartments in their thin bed-dresses. Here the results again are various, according, for instance, as the escape from bed happens by daylight or during the night. Suicides by precipitation from windows or by means of cutting instruments; escapes into town or country in the dead of winter and death by cold; fatal injuries from knocking against furniture or by falls of all kinds; struggles with captors, involving equally serious injuries, or at least, the risks thereof; or fatal pneumonia, phthisis, or other acute inflammations set up by a prolonged or sudden exposure to intense cold—are all among these results. Next there are the *maniacal* inmates of lunatic asylums or private houses, who are ready for every kind of self-destruction or other mischief whether by night or by day.

At present, and for the most part, such patients are treated in hospitals or ordinary dwellings, in some of the following ways:—

1. They are subjected to various forms of *mechanical restraint*; they are bound to their beds by various combinations of sheets, straps, or other fastenings. This mode of restraint is exemplified in the treatment of delirium tremens patients in many hospitals and jails. The patient may not, however, be fastened to the bed, but only rendered helpless and motionless, so that falling or getting out of bed becomes impossible. This is accomplished, for instance, by what is known as the "wet-pack" system in certain English lunatic asylums, the most complete form of mechanical restraint that has yet been devised; as well as by the use of strait-waistcoats, handcuffs, and various modes of fastening together the legs.

2. They are forcibly held in bed by relays of *attendants*, at least two attendants being required on either side of the bed. The result of this mode of management, which is a personal or manual, instead of a mechanical, restraint, is quite as disastrous as mechanical restraint itself is or can be, even when employed or applied in its most objectionable forms.* Exasperation on the part of the patient; incessant struggles between him and his attendants, whom he naturally regards as cruel tormentors; exhaustion, sleeplessness, bruises, or other injuries, are among the many fruits of such a treatment. I find it increasingly difficult to get good attendants, especially female ones. They object to all sorts of extra trouble or risk; they demur at cleansing the dirty, at dressing the untidy, at running risks from the violent. Rather than do any of these things they refuse or resign office. Again, the best-natured of attendants are prone to lose their temper under intense

*I have contrasted manual and mechanical restraint in certain Medical Reports of the Murray Royal Institution, *e. g.*, 37th (1864) p. 12; 39th (1868) p. 16; as well as in several papers in the *Edinburgh Medical Journal* (*e. g.*, in vol. xi., 1865, p. 449; vol. xiv., 1868, p. 333; and vol. xvi., 1870, p. 421).

and continuous provocation; hence the assaults so frequently made by attendants on patients in lunatic asylums, where these attendants are called upon for the exercise of virtues that, did they exist, would be more than human. Lastly, the very best of attendants—of hireling servants—require incessant supervision if they are to do their duty to patients requiring unceasing care. Whenever they are left to themselves, these attendants become careless and neglectful; and the interests of the patients necessarily suffer.* In Scotland, at least, we have nothing, so far as I know, comparable with the nursing of the Roman Catholic brotherhoods, and especially sisterhoods, of the continent. There whole hospitals, including those for the insane, are “served” by men or women, or both, who, from the highest motives, devote themselves to the care of the sick, and whose service is consequently of a real and trustworthy kind. But that sort of human nature which looks simply to the profit to be made by nursing—that of which the nurses of some infirmaries and the attendants of our own asylums consist—is not of the same noble order. And we must take our nursing material as we find or can make them.†

3. They are thrust into *padded rooms* which sometimes have padded floors. There, on a mattress or without one—but without any kind of bedstead—the patient is left to himself. The result of this sort of

* Thus, on visiting an hospital cholera patient during the night, I have found the patient dying and the nurse dead drunk, having swallowed all the whisky, brandy, or wine intended for her charge. And this particular form of neglect of duty is only too common, both in male and female attendants.

† I have repeatedly, during the last twenty years, pointed out—in print—how ample and excellent a sphere the care of the sick in hospitals—both for insane and sane—offers to “unattached” or single women of the middle and upper ranks. Thus, there is a short special notice of “What Educated Women could do, but don’t,” in *Excelsior*—a publication of the Murray Royal Institution in 1864 (No. 19, p. 7).

"liberty of the subject" on the one hand, and of "seclusion" on the other, is that the patient frequently strips himself quite naked, and crouches in a corner of his "cell," exposed to the dangers already described from cold.* Or he is restless, mischievous and destructive—amusing himself by tearing to shreds his body and bed-clothing, as well as by stripping off the covering of the padding of the walls or floor of his cell and dragging forth the padding itself.

4. They are *drugged* or drenched with all manner of *narcotics* or soporifics, sedatives or calmatives, in doses that are at all times dangerous, and are not unfrequently—directly or indirectly—fatal; the immediate and perhaps the sole object being the induction of sleep, or at least of quietude, on the principle of "peace at any price."

Now none of these are fancy sketches. So far from there being any exaggeration—attempt thereat or desire therefor—it is simply impossible for me here to paint such pictures in their true colors—to describe what I have myself seen, and sometimes over and over again, in hospitals for the sane and insane in our own and other countries. That an immense amount of *preventible* mortality—disease, accident, misery—is the fruit of the improper management of patients belonging to the classes, for example, of general and other paralytics, epileptics, fever and other delirium cases, maniacal or other lunatic patients, I have not the slightest doubt.

Very early in my own practice, twenty years ago, at least, I was thoroughly dissatisfied with the current

* Thus, perfectly nude lunatics, without an article of clothing or bedding in their cells, have been exhibited to me, through eye-holes and double doors, in asylums which boast that they are conducted on the "non-restraint" principle—meaning that they are ruled by the mischievous dogma that in no form, and under no circumstances, should mechanical restraint be employed or applied.

modes of dealing with such patients. Casting about for some satisfactory substitute, I was led, as life-saving or protecting apparatus, to adopt and adapt the idea of the crib-bed of the child—the cot so familiar in our nurseries—adding, however, a lid in the case of patients who would scramble out of a bed with sides merely. In the course of twenty years I have had at least six kinds or forms of these beds made, according to the varying requirements of different kinds of patients. All of them were *experimental*, my object being to combine lightness of weight, easy carriage-ability from place to place, with strength sufficient to resist the violence and the destructive propensities of the maniacal. Sometimes all six beds were in use at the same time, for different kinds of patients; while at other times—and this usually—no such bed has been required in any part of the Murray Royal Institution; and it may here be added, that the institution does not possess, and never did possess a “padded room.”

The kind of bed that I have found most useful is the following; and I venture to recommend some such bed to the attention of the medical profession generally, because I am satisfied it is very much wanted in all departments of medical, surgical, and obstetric practice. I am not to be understood, however, as recommending only or preferentially to my confrères who are engaged in other departments of practice, the special form of bed that has been devised and used by myself. On the contrary, I desire it to be distinctly understood that

1. The same form or strength of bed that is necessary in one class of cases—say violent mania—is not necessary in others—for instance, helpless paralysis.

2. The locked lid is only to be used where necessity requires—where a patient would otherwise, to the risk of his life, climb over the sides of the bed.

3. The folding side and its low level, only a few inches above the floor, are most useful in paralytic or other cases that have frequently to be lifted out of bed in order to be bathed or cleansed, and the bedding removed.

4. The use of such a bed does not obviate the necessity for *special attendance*. On the contrary, it is an adjuvant to suitable attendance in a duly-equipped *sick-room*.

Each physician, surgeon, or obstetrician may make his own modifications on the general principle of its construction, viz., that a bed for certain classes of invalids should consist of four easily-movable, separate parts, viz: (1) a lid; (2) a box-like body having a folding side; (3) a stand for the said body; and (4) a bottom.

My own experimental beds have had to be made of sufficient strength to withstand the violent assaults of the ingenious, persevering, strong maniac; and I have not yet found it possible to combine strength of spars in the lid, for instance, with desirable lightness or thinness. All our spars have been occasionally broken by the strong grasp and wrench of destructive patients—a difficulty that might, of course, and probably should, be got rid of by the use of mechanical appliances for the confinement of the hands.

I have designated the bed I have been so long in the habit of using “The Protection-Bed”—a term happily applied to it, many years ago, by Dr. Browne of Dumfries, when he was one of H. M. Commissioners in Lunacy for Scotland, and who had occasion to see such beds in use here during his official inspections. Moreover, he had himself, when at the head of the Dumfries Asylum, used beds of a somewhat similar kind. And in America such beds are,

and have long been, in common use in its hospitals for the insane.*

With certain exceptions, the whole bed may be made of any ordinary pine, or white or *soft* wood, and varnished. The exceptions are the spars of the lid, and the feet, which should all be of birch or other *hard* wood.

Both the interior and exterior may be decorated by various forms of stencilling or hand-painting.

There is no occasion for padding the interior. I have had at least two padded beds; but I did not find these padded beds superior in any respect—even in epileptic cases—to unpadded ones.

Each bed should have at least two—and much better three or four—movable bottoms, so as to admit of change and cleansing in the too-probable event of soakage by urine.

The lid should be so hinged to the body of the bed that it can be removed at a moment's notice; and, when not in use—that is, fastened down—it should always be completely detached and kept in a separate room. If it be simply thrown up against the wall without being unhinged, an incautious attendant, a restless or mischievous patient, may, by a slight push or pull, bring it down with such force as to produce fatal injury to the head, or serious fracture of a limb, should either head or limb be in its way. By making it a rule always to keep the movable lid, when not in use, in a separate room, and to remove it to that room the moment it is unhinged from the body of the bed, there would be no risk of injury from such a source.

The interspace between the spars of the lid should be such as to prevent extrusion of the whole hand or

* A paragraph on "The Use of the Protection-Bed" may be found in the *Edinburgh Medical Journal*, vol. xiv., 1868, p. 332.

of part of the arm; for if the hand and arm be permitted free operation outside the lid, endless mischief will result—apart from the fracture of the spars themselves, whereby, of course, greater scope is obtained for freer action on the patient's part.

The lid, when down, should be firmly fastened to the body of the bed, and this is accomplished in three ways:—

1. By insertion of a strong metal pin through the point of the tongue of the hinge. 2. By the close adaptation of a bead on the edge of the bed to a groove on the under side of the lid; and 3. By the use of a padlock or other form of lock.

The folding side of the bed is most conveniently fastened by means of brass sliding-bolts, sunk in the wood. I have tried various kinds of hooks and eyes, but they do not keep the side so tight, and they are apt to be unloosed by the busy fingers of the patient if by any means he gets them extruded through the spars of the lid.

The bedding may consist of ordinary or special mattresses, pillows, blankets, quilts and sheets, according chiefly to the habits of the patient as to the passing of urine and fæces, or as to destructiveness. In the case of those who pass all their evacuations in bed, I have found it most convenient to divide the mattresses into three equal portions, the two end ones being made in the ordinary way, of the ordinary materials, while the central one is a small bag filled daily with fresh, washed horse-hair. I prefer the latter arrangement to the use of perforated mattresses, covered with india-rubber sheeting. I know no worse material to use than the latter in the case of patients who incessantly soak their surroundings with urine. The Mackintosh sheets, so generally used in such cases, very soon smell

abominably, the result of the decomposition of the urine, which attaches itself quite as firmly to such an apparently non-absorbent material as it does to absorbent blankets or sheets. Nor have I found any mode or degree of washing, deodorizing or cleansing sufficient to purify this contaminated sheeting. I think it better now to use no india-rubber or gutta-percha appliances of any kind in such cases; or, indeed, in any cases at all, for they become useless simply by age.

In the majority of cases, ample room may be given to the patient in the protection-bed for tossing or turning. But, in exceptional conditions, it is necessary so to fill the bed with mattresses and bedding that the patient has room only to turn comfortably. Otherwise certain restless, mischievous patients can strip themselves and crouch at one end by piling up the mattresses and bedding at the other; or they get underneath all the mattresses, and so lose advantage of the soft and copious blanketing provided.

All such instances of mischief arise from leaving the fingers or hands free; and the obvious means of preventing it, therefore, is to resort to some means of confining the arms and hands. I am aware of no good end to be attained by bestowing freedom of action in such cases. The result is simply incessant activity and wakefulness; and this is indubitably exhausting and injurious. On the other hand, there is everlasting risk of mischief—both to the patient himself and to all who come in contact with him—by leaving to him an amount and kind of liberty of which he makes no good use. There is nothing to prevent the application of mechanical restraint in such cases but the circumstance that this—the most humane, the most common-sense, means of treatment—runs counter to the spirit of the age, to that paramount “public opinion” to which most

men bow down in servile idolatry. This public opinion against the use of mechanical restraint, for instance, in the treatment of the most dangerous form of violence, that of the maniac, was created mainly by the doctrinaire Conolly, and has been fostered by the official behavior of Government Boards of Lunacy, and by the press, medical and general. It is, nevertheless, based on one of the grossest absurdities and fallacies of the day—an egregious error, to which thousands of lives have been ruthlessly sacrificed.

I have been in the habit of using the protection-bed in a comfortably heated and furnished *sick-room*, whose arrangements are presided over by a *special attendant*, usually the most experienced attendant in the institution. Whenever it becomes desirable that the patient should be raised from, or allowed out of bed, this attendant calls what assistance he requires, and the patient's interests are sedulously cared for. This personal supervision goes on night and day; for such sick-rooms are never left untended by a proper officer.

The general result of the use of the protection-bed, in some of its forms, as compared with the orthodox modes of dealing with the classes of patients already described, is this—in my opinion—that it is directly and decidedly conservative of life and health, and preventive of injury and disease.* And, in virtue thereof, I believe its employment to be one of the most important practical matters that can attract the attention of the physician, and especially of the hospital physician. By non-professional persons who have unhappily had relatives requiring at home some such adjunct to personal nursing, the value of such a bed has been per-

* Its use in the treatment of the insane is specially commented upon in the Medical Report of the Murray Royal Institution for the Triennium, 1865-8, p. 15.

ceived at once, so that I have had occasion to lend out for long periods, some of our spare protection-beds for the use of invalids, kept at home for private treatment.

Very naturally it may be, has been, and no doubt will continue to be argued, that grown-up men and women must resent being treated like *children*—literally “cribbed, cabined and confined,” as they are, in beds with sides and covers. And it is the case that certain patients do resent the use in their persons of the protection-bed, objecting to the lid especially. But the same patients resent, and as violently, the simple deprivation of their liberty, their removal from home, their compulsory confinement in an asylum, and the whole discipline to which they are there *volens volens* subjected. And the real question in such cases is, or ought to be, not what the patient resents or objects to, but what is for his benefit, present and future. All parents are agreed as to the inexpediency of indulging children in all their whims, or of listening to their protests against all that which, though disagreeable, is nevertheless salutary. And insane patients are very much in the position of *children*; with the added power for evil that greater strength and size and a developed mind can confer. But incalculable mischief results at the hands of Lunacy Commissioners and patients’ relatives from not treating the insane, in certain respects at least, as children. Not what is best for them, but what will gratify or pacify them, is what is too frequently considered; and hence laxity is substituted for stringency of discipline, where the one is no doubt the more agreeable to the patient, and the other, with still less doubt, is the more salutary. As regards the protection-bed, then, the real question is, not whether this or that patient likes it or objects to it, but whether its use is indicated, in his case, as likely to be beneficial.

It has occasionally happened, in my own experience, that the most violent maniacs have become quiescent whenever in such a bed they have found themselves *mastered* and powerless. And in such cases, in this form of bed only, has sleep occurred after many nights and days of struggle with attendants. This sensation of being *mastered* is one that must be produced in many violent patients if discipline is to be successfully carried out in lunatic asylums. It is all very well for *doctrinaires*, who have never themselves had to contend with the difficulties connected with the management of maniacs, to talk of "moral suasion." In many cases it is of no use whatever, and nothing but *superior physical force* is to be trusted to. Were not the physical force, and the intelligence with which it can be duly applied, on the part of our asylum staff, superior by far to that of the patients, asylum discipline—*asylum treatment*—the present "humane system," as it is called, of dealing with the insane, would be impossible. And it is from the non-application of physical force, judiciously and dispassionately of course, in cases requiring it, that so many accidents occur to and from the insane, both out of asylums and in them.

On the other hand, I have had patients, such as fragile, hysterical young ladies, sent to me from other asylums where their maniacal violence had been repressed by manual, not mechanical, restraint, and who were utterly exhausted by want of sleep and by incessant struggles with attendants—struggles directly provoked by the mode of treatment. These patients were at once consigned to the protection-bed, in which they slept like children. And not only so, but they acquired such a preference for their "cribs," such a confidence in their protective power, that they have asked to be allowed to go on sleeping in them—sometimes even with the lid in

use, where it was not for any other reason than the gratification or satisfaction of the patient required. Moreover, they have themselves contrasted this mode of treatment with the other—favorably as regards the bed, and favorably as regards also mechanical compared with manual restraint.

While in some cases, then, there is a terror of or objection to, the protection-bed, of the same kind as that which exists in regard to lunatic asylums, as supposed places of punishment and certain places of detention, in others there is quite as marked a liking for it and appeal for its employment; just as, in certain cases of recurrent mania, the patients themselves voluntarily, and most wisely, “seclude” themselves in their own rooms, in defiance of all the dogmata of Lunacy Boards as to the imaginary evils of “seclusion.”

REPORT OF THE PROCEEDINGS OF THE NEW ENGLAND PSYCHOLOGICAL SOCIETY.

The New England Psychological Society held its Quarterly Meeting at Worcester, on the 12th of March. There were present, Drs. Harlow, Draper, Walker, Fisher, Brown, Earle, Eastman, Lothrop, Stearns, Shew and Knight; and Dr. Russell, by invitation.

Dr. Stearns read a paper on the "Relation of Insanity to Civilization." He held that civilization itself, was not the cause of the increase of insanity which attends the higher development of the human race, but that certain conditions incident to, and dependent upon a high state of civilization, do lead to an increase of mental disease. Some of these conditions were grouped under the following heads:

1. Injurious and vicious education.
2. Imperfect education, *i. e.*, hurrying persons during the formative period of life into the duties and responsibilities that belong only to mature age.
3. Injudicious education, in relation to the age of the child in that it fails to give equal and needed development to the various organs, developing the nervous system for instance at the expense of the digestive or muscular.
4. Sudden acquisition of the means of gratifying animal passions and indulging in excesses.
5. Practices and daily habits, particularly as seen in the rural districts of New England, where the quiet homespun life of our forefathers has given place to the ambitious struggle for wealth and education; and hard work, little sleep, no recreation and bad food exhaust the vital energies.

6. Too little sleep. The idea that time saved from sleep is a gain, is erroneous, and children, youths and adults require sufficient sleep to restore exhausted energies.

7. Unequal distribution of the means of living.

In conclusion, the essence of the paper was crystallized in the following propositions:

Civilization is not a direct cause of insanity. Civilization tends to strengthen the nervous system and render mankind more self-contained and self-reliant; certain conditions incident to the development of a high civilization tend to the increase of insanity.

Dr. Fisher spoke of the tendency, especially in this country, to crowd the professions, as indicating the general desire to rise to positions entailing brain-work rather than to gain a livelihood by manual labor. Inasmuch as the increase of insanity is not essential to higher civilization, but only incidental, we may, therefore, hope for a cessation of disproportionate increase.

Dr. Draper referred to the great increase of insanity among the colored population since emancipation, and queried if it was due to increased intellectual activity.

Dr. Shew said statistics would show a larger proportion of insanity among illiterate, than among educated people; but few cases were due to too great education and when this was apparently the case, other causes were usually more prominent. He thought the emotional nature was more easily disturbed, and such disturbances more frequently the cause of insanity, than were derangements of the intellectual nature. The question, however, is very complex, and it is difficult to decide just the influence that each element has therein.

Dr. Lothrop queried how much the increase of syphilis among the negroes had to do with the increase of insanity.

Dr. Brown thought the medical profession ought to cry out against the great pressure brought to bear in our educational schemes. In this country, we want to complete an education at eighteen or twenty that in England would occupy till twenty-four or thirty. Good regular life and plenty of sleep are God's laws, and if they are violated, suffering must follow.

Dr. Russell believed in sleep; business men suffer from lack of sleep and too close application and irregular dietetics.

Dr. Earle said the proportion of insanity among educated classes was certainly smaller than among uneducated. Dr. Tuke, of England, holds the same views. But the "windfalls" are alarmingly frequent. Insanity in Massachusetts is increasing in a ratio in excess of the increase of population. The first census in which an account was taken of the insane in the United States, was in 1840. That census is very unreliable, especially in regard to the colored insane. Very few were recorded in the slave States, while in New England, there were many negroes purposely registered as insane, in towns where no negroes lived, and all the inmates of the Worcester Lunatic Hospital, were returned as blacks; the purpose being to show the evil effects upon the negroes, of freedom.

Dr. Knight did not think proper high culture developed insanity, but on the contrary, the educated were fortified against this disease; but during the educational process the weaker ones will fall by the way. Insanity has increased in Connecticut from seven hundred and fifty in 1864-5, to eleven hundred in 1877, with very little increase of population.

Dr. Walker said he had been informed by Dr. Parker, of South Carolina, that the late increase of insanity among the blacks was more apparent than real,

that in *ante bellum* times the insane slaves were quietly kept on the plantations, and not so open to observation as of late years, where they are thrown on the public for support.

Dr. Eastman had been painfully impressed with the evils of over study among the young; but thought the fault largely chargeable to parents, who abetted the forcing style of the present day.

At the evening session, Dr. Eastman read a paper giving the statistics of eighty-one cases of general paralysis observed by him in the last five years, which agreed very closely with the general tabulated observations as found in standard text books.

The general experiences of the members co-incided with that of Dr. Eastman, and with the generally accepted views of alienists regarding this disease.

The following resolutions, touching the death of Dr. John E. Tyler, late president of the society, were unanimously adopted :

Resolved, That in the decease of the late Dr. John E. Tyler, of Boston, Mass., this society has lost one of its most earnest and useful members; that we have been deprived of a cheerful, cordial and ever agreeable associate; and that the people of his adopted city have cause to regret the departure of one who could minister to a mind diseased, with intelligence, skill, and a warm and sympathetic heart.

Resolved, That we extend to his afflicted family the acknowledgment of our heartfelt participation in their sorrow.

Resolved, That Dr. J. P. Bancroft be appointed to prepare a memorial of our deceased friend and present it at a future meeting.

Resolved, That the secretary furnish a copy of these resolutions to the afflicted family.

The next meeting will be held Tuesday, September 10, at Worcester.

B. D. EASTMAN,

Secretary and Treasurer.

RETROSPECT OF GERMAN, FRENCH AND ITALIAN LITERATURE.

BY THEODORE DEECKE.

ETUDE MEDICO-LEGALE SUR LES EPILEPTIQUES. Par le Dr. Legrand du
Saulle, Paris: 1877.

The learned author, to whom the profession is indebted for quite a series of able essays on psychological medicine, in the ten chapters of this volume, presents his wide experience on the subject of epilepsy. The first two chapters are devoted to the description of the different grades of epileptic fits and spasms. In all cases, these can be preceded by states of unconsciousness, during which violent actions may be committed, though the persons can not be considered as insane. The third chapter treats of epileptic insanity, and the fourth, the most interesting part of the essay, of larvated epilepsy (*l'épilepsie larvée*).

The author says: "There is a class of persons who, at times, generally periodically, exhibit sudden disturbances of their mental actions of short duration. They manifest themselves as perversities in character, in deportment and in emotions, with or without hallucination of sight, yet always concomitant with a loss of remembrance of that which has occurred during these states of impaired feelings, reason and actions. These persons, who sometimes commit the most unexpected actions, are in their common habits of life, neither eccentric nor immoral, neither excessive nor criminal; during the time of the mental aberration, however, they always act absolutely in the same manner, and they are governed by the same emotions. The morbid manifestation is of a psychical nature; it is epilepsy of the mind. Dizziness, spasms and fits are absent, sometimes they develop in later stages of the disease, sometimes never." With these unfortunate beings the author classes those singular vagrants who at times suddenly disappear from their homes and family, and who, to their own surprise, are re-discovered in places, often far away, not unfrequently confined in prison, mostly without any means for their support, and always without remembrance of the circumstances connected with their vagrant courses.

Another class of patients, according to Legrand, are the alcoholic epileptics. They may present different features, but one thing common in all is the presence of epilepsy and of alcoholism. Hereditary influences play an important roll. In a number of cases the paroxysm occurs regularly with an excessive use of alcoholic liquids and there is generally marked impulse to sudden violent actions and to suicide. Epileptic convulsions in chronic alcoholism are not unfrequently observed, yet they are not as severe, and rarely accompanied by states of entire unconsciousness.

There is another form of the disease which the author calls paralytic epilepsy.

The violent actions of epileptics in general are characterized by their wildness and cruelty, by the absence of all motive, of all premeditation, of all precautionary measures at the time of their commitment, and all desire to conceal them; there is either no remembrance at all of the action, or a faint recollection that something has happened.

In the last three chapters Legrand discusses feigned epilepsy, responsibility of epileptics and the legal value of transactions of epileptics.

From the medico-legal stand point the author distinguishes three different classes of epileptics. In the first, the disease exerts no influence upon the mental condition; in the second, the state of mind is only temporarily affected before and after the paroxysm; in the third, there is a grave and prolonged mental alienation.

Legrand contests the view that an epileptic should be considered either as accountable or not accountable, as sane or insane. The first are accountable, the second only partially or according to circumstances, the third are not accountable. The more closely an action committed by an epileptic is related in time to the paroxysm, the more are we compelled to suspect a mental alienation. The author declares that the actions of epileptics are liable to diverse criticism and judgment; and that when a defendant is epileptic it should in each case be investigated, as to what his mental condition was at the time of the act committed, and he concludes that,

- a. If he is of sane mind, he is responsible for his actions.
- b. If his mental faculties are impaired to a certain extent, he is irresponsible for his actions only to the degree of the impairment of his mental faculties.
- c. If he is insane he is not responsible.

The transactions of epileptics in the lucid intervals are in general to be considered legal.

CONTRIBUTIONS A L'HISTOIRE DE L'EPILEPSIE DANS SES RAPPORTS AVEC L'ALIENATION MENTALE. Par le Dr. Garimond. Agrégé de la Faculté de Médecine de Montpellier; Médecin en chef de l'Asile privé de Pont-Saint-Côme. *Annales Medico-Psychologiques*, Janvier & Mars, 1878.

Dr. Garimond's contribution to the history of epilepsy in its relation to insanity, is a criticism of the views, especially of French alienists, since the establishment of Morel's theory of the so-called larvated epilepsy (*l'épilepsie larvée*), a condition of mental alienation developed through the influence of epilepsy, yet without convulsions. In the words of Morel, epilepsy is "a form of insanity which can manifest itself exclusively by convulsions, or exclusively by delirium." It is the latter form which Morel designates by the name of larvated epilepsy. Our author does not concur with this view. The principal point in opposition is the relation between the epileptic fit and the delirium, and Dr. Garimond quotes in reference to it from the writings of all the prominent French alienists since the year 1850, and discusses their opinions at length, concluding that neither from the symptomatological nor from the etiological, pathological nor prognostical standpoint, is it justifiable to admit the distinction of a new form of epilepsy, characterized only by cerebral symptoms. "Epilepsy," the author says, basing his definition upon pathological experience and physiological experiments (of Brown-Sequard and others), "is not a cerebral disease." The cerebral symptoms he considers as of secondary nature and merely complications of the disease. The disease itself can exist without their being developed. Those of a delirious nature, which are claimed to be characteristic of the so-called larvated epilepsy, do not, according to the author's experience, differ from the delirium in conditions of mental alienation in general and must be ascribed etiologically, to various lesions and affections. The author concludes his article with the following remarks:

1. The delirium related to epilepsy, without being preceded by convulsions, unconsciousness or vertigo, can not be conceived as an existent condition of a special disease, as its name indicates.
2. Etiology, symptomatology, prognosis and pathology do not permit of such a designation.
3. Modern physiological investigations have shown which are the organs primarily affected, the true originators of the special phenomena comprised under the name epilepsy. It is but secondarily, and in the progress of the disease that the cerebrum partici-

pates in it, and the delirium is not necessarily connected with the paroxysm.

4. Acute and chronic insanity are common in epileptics; they have, however, no other connection with the fit than that they are the consequence of it. The former in fact, may take part in the development of insanity, and may act either as the predisposing and provocative cause, or as the predisposing cause alone. It is therefore, correct to consider this influence in the classification of mental alienation; I would, however, prefer to the name insanity with epilepsy, epileptic or epileptiform delirium.

In these views the author of course places himself in opposition to a great number of our modern alienists especially of the clinical schools in France and Germany. It is true, in the latter country Morel's "larvated epilepsy" has not met with approval, yet more on the ground of the peculiar name selected by the discoverer, than of the clinical description of the disease; the term generally accepted is "psychical epilepsy."

CASES OF PSYCHICAL EPILEPSY. By Dr. J. Weiss, of Vienna. (*Psychiatrische Studien aus der Klinik des Prof. Leidesdorf, Wien, 1877, and Allgemeine Zeitschrift für Psychiatrie, 1878, Vol. xxxv. i.*)

In Germany, Griesinger,* under the name "epileptoid conditions," first called attention to certain forms of mental alienation resembling those described by Morel as "larvated epilepsy." It was not however, until the monograph by Dr. P. Samt,† "on the epileptic forms of insanity," that they became the subject of earnest clinical study. Dr. Samt under the name "psychical epilepsy" (epilepsy of the mind, cerebral epilepsy of other authors) gave a distinct clinical description of the condition, a picture of a well marked disease, characterized not by the one or the other peculiar symptom, but by the whole feature of the morbid affection and its course. Dr. Weiss, in his first paper, reports four cases and two more in the second. They widely differ in their individual history, but common in all is a negative characteristic, the absence of all spasms and convulsions before or during the attacks. They are also well marked by the entire amnesia connected with them, or a much veiled consciousness, by their periodicity and by the sudden commencement and termination of the paroxysm, and the normal psychical condition in the intervals.

* Archiv für Psychiatrie, Vol. I, page 320.

† Archiv für Psychiatrie, Vols. V and VI, 1874 and 1875.

TWO CASES REPORTED BEFORE THE MEDICO-PSYCHOLOGICAL SOCIETY IN
BERLIN. By Prof. Westphal. *Archiv für Psychiatrie*, Vol. vii, 3, 1877.

In one case, reported by Westphal, attacks of "larvated epilepsy," for a long time, preceded general paralysis. The patient, forty-one years of age, had been several times arrested for immoral offenses. Again, in 1869, indicted for misconduct, it was discovered that he occasionally suffered from sudden attacks of unconsciousness, a fact which led to his transfer to the wards for the insane in the Charité, for observation. His sleep was disturbed, he had slight attacks of vertigo; at times a slight hesitation in speech was noticed; his intellect was not impaired and he had no delusions; his history, however, revealed unmistakable epileptic antecedents. In the summer of 1870 he was discharged. In April, 1871, he was again heard of as suffering from headache, attacks of dizziness, etc.; yet it was not until November, 1875, that he was again admitted into the asylum on account of insanity, with paralysis and maniacal paroxysm.

The second case of Prof. Westphal was marked by peculiar paroxysms of somnolence. The patient, forty years of age, after some grave anger, had a fit, during which he became speechless, tremulous, and much excited. Since that time these attacks recurred frequently. In the Charité there were two kinds of attacks observed. In the one, the patient commenced to stagger as if intoxicated, the eyes were half closed, the respiration accelerated and the muscles of the face, especially the lower jaw, showed slight convulsive contractions. The other affections were attacks of somnolence. The patient, either left to himself or during conversation suddenly fell into sleep, in which condition he often remained for quite a while, although he was easily awaked. He was frequently overcome by these attacks when walking in the streets, and he thus often encountered with other persons, dashed against lamp-posts, etc. The author is inclined to rank these affections among the epileptoid conditions and from a forensic point of view, calls special attention to them.

EPILEPTOID CONDITIONS OF SOMNOLENCE. By Dr. F. Fisher, Physician to the Insane Asylum in Pforzheim, Germany. *Archiv für Psychiatrie*, Vol. viii, 1, 1877.

In connection with the foregoing case of Prof. Westphal, the author reports a similar condition observed in a girl twenty-two

years of age. Up to her sixteenth year she had always been in perfect health, when she became chlorotic. She suffered from hoarseness, which resisted all medical treatment, until, after six months, this suddenly ceased, while the following affection developed—from two to six times a day she suddenly fell asleep. These attacks occurred independently of what she might be doing, even when walking in the street, and they generally lasted from five minutes to one hour. It was not in her power to resist these attacks. A short time previous to the paroxysm she noticed an uneasy feeling, but this arose so suddenly that she generally was not able to make any preparation to sit down, etc., before the attack commenced. In the beginning of this affection she had suffered most from sleeplessness, and she had frequently the sensation as if the blood was rushing to her head and was pouring out from the back of her head. Her appetite was good, bowels and menstruation regular, yet a short time before menstruation the attacks were more frequent and of longer duration. Sometimes just before the paroxysm she spoke in an irrational manner, of which she had no remembrance. Other psychological disturbances have not been noticed; her memory was good, and she was good-natured and physically well developed. She had been, during two months, under electrical treatment without success. During the paroxysm there was a noticed marked insensibility to the action of the galvanic current.

ON THE RELATION OF THE CEREBRUM IN THE PRODUCTION OF EPILEPSY.

By Prof. Pietro Albertoni, of Siena. *Archivio Italiano per le Malattie nervose*, 1877.

The author describes the effect of a weak induction current (one Grove's element) applied to the posterior central convolution of the brain, the convolution in which are located quite a number of the excitable points of the cortex cerebri, discovered by Hitzig and Ferrier. The animals operated upon were dogs, cats and rabbits. Dogs and cats are immediately seized with convulsions; they become unconscious and bite the tongue; the pupils are dilated, and there is a copious secretion of saliva. They exhibit the picture of a true epileptic fit, with clonic and tonic spasms. The attack generally lasts from two to five minutes; the animals then pass into a delirious condition and regain the normal state after about half an hour. If the experiment be repeated on the same animal two or three times a day, the excitability of the

brain becomes exhausted. In one of the dogs, Albertoni repeated the experiment seven times in one day. Attacks of the same nature can be produced by depressing the trepanned part of the skull just opposite the convolution before mentioned.

The author, in opposition to the experience of Ferrier, has not been successful in producing the same affection in rabbits.

The locality in the cortex cerebri, where the weakest current produces the described effect, is called by Albertoni the epileptic zone. It is entirely confined to the posterior central convolution. Very strong currents, it is true, produce, apparently by diffusion, the same effect upon other parts of the brain. If, however, the posterior central convolution is isolated, separating the same from the neighboring parts of the brain by the introduction of thin plates of glass, the epileptic attack is only produced by the connecting fibers of the pedunculi cerebri. The irritation of these tracts, after removing the epileptic zone was followed by the same effect. (The latter fact seems to be another proof of the correctness of the objections made by Schiff* concerning the true value of the experiments in question.—D.)

Anæsthesia, produced by ether or by injections of chloral into the vena cruralis, impedes entirely the development of the phenomenon.

In order to decide the question, whether the cortex cerebri by itself, or in a reflex manner from the centers in the medulla oblongata, is capable of producing the epileptic phenomena, the author removed the epileptic zone of both hemispheres, following which the convulsions at first manifested themselves on the opposite side; later on, general convulsions occurred, until the reaction ceased entirely. The author, from these facts, concludes that the motor centers at the base of the brain are the true originators of the phenomena in question, and that the centers in the cortex are not to be considered as autonomous, but that they produce the epileptiform convulsions in a reflex way.

The author by the two last experiments reported in his paper, demonstrates that the copious salivation observed during the attacks depends upon an increased action of the glandulæ submaxillares, produced by an excitation of the same, transmitted through the chorda tympani.

* Reported in our JOURNAL, January, 1878, page 379.

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REVIEW OF ASYLUM REPORTS, 1877.

MAINE:

Thirty-Seventh Annual Report of the Maine Insane Hospital, Augusta: 1877. H. M. HARLOW, M. D., Superintendent.

Beginning with 405 patients, 194 were admitted during the year and 183 were discharged. Of the latter, 72 had recovered, 35 were improved, 28 unimproved and 46 died.

The percentage of recoveries on the number admitted was 37.6. One who was discharged recovered, had been under treatment eight years.

The weekly cost per capita was \$4.58.

Considerable improvements were made in the institution during the year, especially as to the water supply and ventilation. Over one section of the report is the caption, "*New Building Needed*;" so that Maine forms no exception to the rule of demand for increased provision for the insane.

MASSACHUSETTS:

Twenty-Second Annual Report of the State Lunatic Hospital, Northampton: 1877. PLINY EARLE, M. D., Superintendent.

Beginning the year with 464 patients, 139 were admitted and 128 discharged. Of the latter, 33 had recovered, 21 were improved, 32 unimproved and 42 died. The percentage of recoveries on the number admitted was 23.9.

The weekly cost per capita is given as \$3.70.7.

It is due to the Superintendent to say that *in reality* only 134 *persons* were admitted to the Hospital during the year; because, owing to the adoption, in that insti-

tution, of a singular system of tabulation and statistic construction, one would be led to suppose, by the table from which we quoted above, that 139 had been received and 33 had recovered, whereas only 32 recovered, the system referred to enabling him to discharge *two hundred per cent of one person*. We are surprised to find the doctor admitting, and discharging as recovered, the same person two or more times in the same year, and we are quite inclined to believe that he must draw his conclusions as to the "unreliability of recoveries" largely from his own experience. Were he to make a distinction between the *return* of a patient within the fiscal year, and his *readmission*, he would avoid much of the *erroneous* phase of his statistics that has proved such a bug-bear to him. If he will turn to the twenty-first annual report of the State Lunatic Asylum, at Utica, he will there see that the Superintendent of that Institution (the editor-in-chief of this JOURNAL) has anticipated him by more than a dozen years in calling attention to the exaggeration in statistics of recoveries. In an analysis of the whole number of patients (6,916) admitted from the opening of that Institution to the date of the report, Dr. Gray shows that of all recoveries (2,714), only 10 per cent were of readmissions. From that analysis it appears that 40 per cent of the whole number (6,123) of *persons* admitted in the twenty-one years had recovered. We do not think the statement was ever made that 70 or 60, or even 50 per cent "of insane persons, as they first appear at the hospitals can be permanently cured and restored to the class of producers." Any statement that we have seen involving these high percentages of recoveries has been upon the basis of a *first* attack, and the admission occurring *within three months* from its appearance. We regret to say that the whole

tenor of the doctor's remarks is to depreciate the benefits of asylum treatment, and to make the public still more careless as to the prompt commitment of the insane to such institutions.

Forty-Fifth Annual Report of the Worcester Lunatic Hospital.

BARNARD D. EASTMAN, M. D., Superintendent.

The year commenced with 487 patients, and closed with 528. During the year 354 were admitted and 313 discharged. Of the latter, 72 had recovered, 97 were improved, 74 not improved, 1 was not insane, 2 eloped, and 69 died. The percentage of recoveries on admissions was 20.3.

The weekly cost per capita is given at \$3.64.

A new building was completed about the close of the year to which the patients were transferred from the old one, except one hundred chronic cases. These were left in the old building, which has been set apart by the Legislature for the chronic class. The two institutions remain under the same Board of Trustees.

Dr. John G. Park, who was Assistant Superintendent under Dr. Eastman, was appointed Superintendent of the old Institution, and Dr. Enoch Q. Marston, late of the Tewksbury Almshouse, was appointed Assistant to Dr. Park.

Twenty-Fourth Annual Report of the State Lunatic Hospital, at Taunton: 1877. W. W. GODDING, M. D., Superintendent.

The number of patients in the Institution, September 30, 1876, was 692. During the year 552 were admitted, and 468 discharged. Of the latter, 126 were recovered, 162 improved, 75 unimproved, 7 eloped, and 105 died. The percentage of recoveries upon the number admitted was 2.28.

The per capita cost per week is given as \$3.75.

In this report Dr. Godding delivers his valedictory to the Trustees of the Institution, having resigned his position to take charge of the Government Asylum at Washington, in which he had been Assistant Superintendent for a long time before going to Taunton.

The Doctor embraces this opportunity to express his views regarding some points in the policy of Massachusetts toward her insane:

It is wonderful that Massachusetts, whose Great and General Court has each winter been besieged by so many elderly women of both sexes having a mission, has been able to maintain so uniformly good a policy in regard to her insane; the sober second thought has generally saved her from absurdities. With the able commission this year appointed to revise her charities and corrections, it is to be hoped the matter will be allowed to rest, and some basis of the care and management of the insane agreed upon, not subject to the upheavals of annual legislation. Let us have a distinct policy, and abide by it. The isms of mere theorists should have no place in science. In regard to one class of the insane, about which there has been much anxiety and some controversy, the policy of Massachusetts seems to be settled, and substantially correct. The new State prison at Concord, rapidly approaching completion, with its special provision for the convict insane, and that which, by the Law of 1874, Chapter 370, is provided at Worcester and Danvers for the homicidal class, who, by reason of insanity, have been acquitted, or have not been brought to trial, will relieve our hospital of an element that has always been a blot, and that more than any other has rendered bolts and bars necessary, to the extent of giving a prison-like aspect to all our wards. Massachusetts has reason to congratulate herself on her position in the matter of the so-called criminal insane. Can we say as much in regard to the chronic insane? It seems to me almost axiomatic, that the most humane and enlightened care is the best for the chronic no less than the recent insane. As a matter of State policy, should we be satisfied with anything short of this? In 1866, Massachusetts opened a receptacle for the chronic harmless insane, at the Tewksbury Almshouse. It was heralded as the dawn of a new era in the management of the insane, and great hopes were expressed by the Board of State Charities and others that we were about to demonstrate how much better and

cheaper the incurable harmless insane could be cared for by themselves. To the social scientists of that day the great burden of insanity on the community seemed trifling. Illumined as it is by the light of this new hope, I know of no pleasanter reading for a summer afternoon now, than the almost forgotten literature of the Board of State Charities in their Sixth and Seventh Annual Reports. There were to be no more State hospitals for the insane in Massachusetts; perhaps two of those already existing could be dispensed with; certainly there should be no enlargements except at Tewksbury; this was to become the model farm asylum, where all the inmates would engage in agricultural pursuits, and in imitation of which numerous smaller farm asylums would spring up all over the State. These farms were to be nearly, if not quite, self-supporting. Singularly enough, no opposition seems to have been anticipated from the farming population of the State on the ground that they would be "ruined by lunatic cheap labor." Apparently in pity for Boston, at that time contemplating the building of a new hospital for her insane, we find in the Seventh Annual Report of the Board of State Charities, under the head of Farm Asylums, this suggestion: "The State could keep all the pauper lunatics properly belonging to Boston for less than the interest of the capital which it is proposed to invest in a new hospital; and save to the city the cost of maintaining a palatial establishment." The State has since "done it" at Danvers. In the writings of that day, Gheel is painted like Arcadia, and the establishment at Clermont paralleled only by the happy valley of Rasselas. To-day I do not understand that any one claims that the harmless incurables are any better cared for at Tewksbury than in the State hospitals; and I think it will be generally admitted, by those who are in a position to know the facts, that the hospitals themselves are rendered more noisy and less desirable for the treatment of acute cases by the withdrawal of this quiet class. The cost for the separate maintenance of the quiet and harmless class is, of course, something less than that of the same number from all classes; but I think it demonstrable that the expense of those remaining after the quiet ones have been removed is proportionally so much increased, that if the hospitals were not crowded beyond their normal capacity they could not be made self-supporting at the present rates without material reduction in the expenditures hitherto deemed necessary for the comfort and best care of their inmates; and the Old Bay State, at an expense of \$3.50 per week for each patient, against an average expenditure of about \$4

per week by the rest of the New England States, can hardly be accused of providing too sumptuously for her insane. All the changes and improvements that have lately been made at Tewksbury have been in the direction of making it less a mere receptacle, and more like the hospitals for the insane. With its present able medical staff, the time is propitious for Massachusetts to correct her mistake, to change her policy towards her chronic insane. These gentlemen are abundantly able to take charge of an institution that shall have for its object the cure no less than the care of the insane.

The trustees make the following remarks upon the subject of restraint and open doors:

How gladly would we unlock the doors, and give the largest liberty to these unfortunate beings, were we not satisfied from our observation and experience, that such a step would be attended with the most direful consequences. We have the highest respect for the kindness of heart which prompts those philanthropists who feel that they are divinely appointed to point out the true mode of alleviating the insane, to say, "Throw off all restraint," "unlock your doors," and "let them go at large." Can it be that such persons ever ask themselves the question, "Why are these unfortunate ones here?" "Why are they sent here?" It is not because *their friends*, who otherwise would be the last persons in the world to have them separated from them and sent to a hospital, have found from bitter experience that it is necessary they should be under restraint, and be more or less confined? Experience is the great teacher in this as in other matters. And experience, ample, varied, universal, points to no uncertain course in the care and treatment of the insane. That the patients should be enlarged on paroles, more or less limited, according to their mental condition, we agree. That they should be employed on such work as they are capable of doing profitably, we agree. And the trustees of this hospital, regretting that it has not been in their power to employ more generally the throng they have had to care for, are unanimous in the purpose to give all the employment in their power to the convalescent and moderately insane patients, which it is practicable and safe to do. But to unbar the doors and allow the patients indiscriminately to run and roam, we are certain would be attended with consequences of which the trustees ought only to be "acquitted by reason of insanity."

RHODE ISLAND:

Report of the Butler Hospital for the Insane, Providence: 1877.

JOHN W. SAWYER, M. D., Superintendent.

There were in the Hospital at the commencement of the year, 145 patients. During the year 124 were admitted and 113 discharged. Of the latter, 49 had recovered, 45 were improved, 12 unimproved and 7 died.

The percentage of recoveries upon admissions was 39.51.

"The past year completes the third decade of the active operations of the Hospital," and the Doctor gives "a review of the work and its results, and a comparison of the earlier and later years."

During the past year the average charge per week for board, was \$7.36, and the average expenditure per patient, per week, was \$7.63. Although this is a corporate asylum, the State has appropriated annually \$2,000 "to be distributed by the Governor to worthy applicants, each beneficiary receiving assistance in the payment of his board at the Hospital, at the rate of \$100 per year or about two dollars per week. Such patients have been charged the minimum rate or about two-thirds the actual cost of their maintenance, and this charge has been still further reduced by a credit in their account of the sum received from the State." The Doctor earnestly recommends the establishment of a fund by private benefactions, the income of which should be expended in assisting worthy persons of limited means, to the benefits of the Hospital.

CONNECTICUT:

Twelfth Report of the Connecticut Hospital for the Insane, Middletown: 1877. ABRAM M. SHEW, M. D., Superintendent.

The year began with 466 patients; 153 were admitted during the year, and there were discharged—recovered, 41; improved, 44; stationary, 34; and 31 died. The

percentage of recoveries on admissions was almost 27.

The weekly expense per capita was \$4.81.

The Doctor utters the general cry for "more room." Seventy applicants are waiting to be admitted to that Institution, and in the various town receptacles of the State there are about four hundred insane who need better accommodations. He advocates the erection of a new hospital and objects to the enlargement of the one under his care. He opposes the erection of asylums solely for the chronic insane and the rendering of institutions for the insane economical by lessening the amount or quality of attention and care or reducing their hygienic conditions.

NEW YORK.

Ninth Annual Report of the Willard Asylum for the Insane, Ovid: 1877. JOHN B. CHAPIN, M. D., Superintendent.

The number of patients in the Institution November 30, 1876, was 1,170. During the year, 221 were admitted and 122 discharged, leaving at its close 1,269. Two were discharged recovered; 15, improved; 26, unimproved, and 79 died.

The total number admitted since the opening of the Asylum is 1,896. Total discharged—recovered, 36; improved, 92; unimproved, 98; and 401 died. The average duration of insanity in those who died was 10 1-2 years.

The weekly cost per capita is given as \$2.87 1-2.

The managers request appropriations for a large pump to supply water to the present group, and any additions which may be made; for a locomotive and rolling stock for a steam railroad which has been built connecting the various buildings; for boats to ply upon the lake and neighboring canals to move supplies, patients &c; to paint the outside of the main building; to provide outside steps for the main building;

to purchase cows and enlarge barns, and for machinery for the workshops, laundry and engine-house.

The Institution now consists of five separate buildings, the main building, three large "groups" and the former agricultural college. The managers suggest the erection of another "group." The Asylum is upon a farm of 750 acres, giving a very great source of revenue (\$21,797.09) the past year. The managers quote from the Annual Report of the State Comptroller the amounts appropriated for the State asylums from their inception. State Lunatic Asylum at Utica, expenditures of original construction, land, &c., and improvements, alterations and repairs for thirty-five years, \$1,402,580.68. Willard Asylum, eight years in use, \$1,389,521.02. Hudson River Hospital, seven years in use, \$1,609,037.03. Buffalo Asylum, \$1,008,852.91. Homœopathic Asylum, Middletown, \$593,919.89. In all, \$6,003,911.53, which they show to be \$2,382,703.83 less than has already been expended on the new Capitol at Albany. And they add, "If the entire amount appropriated to this time for the above purposes were raised in one year upon the present assessed valuation of the State, it would require a tax of less than two and one-fourth mills on the dollar." This would seem to show that the State is able to take care of its insane.

We are glad that Dr. Chapin is following the lead of the Asylum at Utica, in "asking for authority to appoint a physician, selected with special fitness from previous preparation and training, to enter upon some systematic researches into the pathology of insanity." In 1867 Dr. Gray secured the services of Dr. E. R. Hun, of Albany, in special pathological work, and the results were so satisfactory that in 1868 he was formally appointed, and a law unanimously passed the legislature authorizing a special pathologist as one of

permanent medical staff. After ten years of systematic, successful investigation, it is gratifying to find Dr. Chapin entering with us into this important field.

Seventh Annual Report of the Buffalo State Asylum, Buffalo:
1877.

The administration building and the five divisions on one side are all now under roof and nearly ready for plastering. An appropriation of \$175,000 is requested, which the managers "are confident will enable them to finish the buildings and improve the grounds, and then open its doors for the reception of the unfortunate class for whose benefit it has been erected. This is independent of the sum necessary to furnish and equip the buildings for occupation."

At the session of the Legislature in 1874, an act was passed authorizing the Governor to appoint a superintending builder, who was "vested, so far as the construction of the building was concerned, with all the *duties, powers and responsibilities* heretofore imposed or conferred upon the Board of Managers heretofore appointed to take charge of such buildings," thus superseding the Board of Managers in the duties imposed upon them by the act under which they were appointed. The superintending builder entered upon his duties in July, 1874, with full power under the law to make contracts and draw his individual drafts upon the Comptroller, without a check upon his operations, and exercised the extraordinary powers with which he was vested until the month of July, 1875, when the Board was re-invested with power under an act passed by the Legislature of that year. During the year that the superintending builder had charge, he expended the sum of \$132,034.53, and assumed the responsibility of altering and changing the original plans, seriously marring the beauty and harmony of the general design. Important portions of the work done under the immediate direction and supervision of this officer, as well as some of the work previously executed, were found, when the managers again assumed charge, to be very defective. They could not permit themselves to overlook these grave defects in construction. Stone which had been cut in accordance with the plans for the gutter line and coping of the roofs was discarded,

and wood substituted therefor. The slating of the roofs of male wards A and B, which had not been done in accordance with the specifications had to be taken off and relaid largely at the expense of the contractors. In addition to this, the State itself has been compelled to expend a large sum, in remedying defects and making good faulty construction.

The managers put this statement upon record, as they are unwilling to be held responsible for the acts of a single individual whom the law allowed for a season to supersede them, as the acts of omission and commission of this officer involved no light expense to the State.

Seventh Annual Report of the State Homœopathic Asylum for the Insane, Middletown: 1877. SELDEN H. TALCOTT, M. D., Superintendent.

The number of patients in the Asylum, November 30, 1876, was 85; during the year 143 were admitted, and there were discharged—recovered, 46; improved, 21; unimproved, 18; not insane, 1; and 14 died. The percentage of recoveries on the number admitted was 32.1.

The Managers give an account of the improvements that have been made during the year.

The Superintendent calls attention to the considerable increase in the number of patients. Quite a number of chronic cases have been received, partly "to gratify those desirous of trying as a last resort the efficacy of homœopathic treatment," and partly "to fill up the otherwise unoccupied wards and effect a reduction in the *per capita* expense." He declares that no palliative treatment is resorted to "in the form of hypnotics or anodynes," and that they "rely exclusively upon the single homœopathic remedy, selected with care according to the laws of cure." "By such medication we have had little difficulty in securing the quiet and comfort of our patients, and in a very fair proportion of cases a satisfactory recovery under the methods we have

employed." "Mechanical restraint has been reduced as far as considered practicable and safe; but it has not yet been entirely done away with. We have, during the summer, had a few close rooms fitted up, and have used them for some of our most violent cases with gratifying results. We purpose pursuing this experiment still further as fast as our somewhat limited means will admit." Under the head of labor, the Doctor remarks: "Employment, to be beneficial and of assistance in the restoration of mental equilibrium, must be adapted to the condition, the habits, and the tastes of the individual. One man will cultivate flowers and find pastime in the work; another will find equal enjoyment in driving a plane or handling a saw. The work for each must be selected according to his tendencies and desires. None should be allowed to labor unless physically strong enough to endure the burden without undue prostration. Work should be continued only so long as it imparts tone and vigor to the system. Each patient who is employed should be under the supervision of keen, careful observers, and when the work has become a weariness, it should be discontinued."

Annual Report of the New York City Asylum for the Insane, Ward's Island: 1876. A. E. MACDONALD, M. D., Superintendent.

There were 593 patients in the Asylum, January 1, 1876. During the year, 381 were admitted, and there were discharged—recovered, 46; improved, 64; unimproved, 37; not insane, 15; and 131 died. The percentage of recoveries on the number admitted was 12.

The weekly cost per capita was \$2.33.

The fifteen discharged "not insane" were drunkards, and among those who died were six also "not insane." These were cases transferred from the general hospitals

of the department, "in whom delirium, as death approached, was converted into an evidence of insanity, and held to justify their transfer, and the addition of their names to our death list instead of to that of the institution to which they legitimately belonged." Two deaths were from suicide; one by suspension, the other by drowning. Two other deaths were by accident—both cases of epilepsy—one by drowning, the other from choking with food, due to a fit while at table.

The Doctor has arranged a table of heredity, from the cases that died and those discharged, instead of from those admitted, since this course gave him the greatest advantage in learning the histories of those tabulated. On this basis he announces a percentage of 60.9 in whom hereditary taint was shown. We find, however, by referring to the table, that this includes (besides insanity) hysteria, imbecility, epilepsy, apoplexy, chorea, intemperance, phthisis and syphilis. The cases of direct heredity—insanity occurring in ancestry—form but 12.6 per cent.; and, including collateral cases (brothers and sisters), 20.1 per cent. A considerable portion of the report is devoted to Paresis, giving a series of illustrative cases and histories of post-mortems. The article on Paresis in a recent number of this JOURNAL evidences the earnest study which the Doctor has given to this subject.

Among the improvements mentioned is that of the dietary, which has been followed "with marked benefit in the bodily condition of the inmates, and marked effect upon their progress toward recovery." The quality of the clothing has also been improved. The number of attendants has been increased, and exercising-yards established, so as to afford more out-door air and exercise.

Report of Brigham Hall, Canandaigua: 1877. D. R. BURRELL, M. D., Resident Physician.

During the year 1877, 102 persons were treated in this Hospital; 41 persons were admitted and 42 discharged, leaving 60 under treatment at the close of the year. Of those discharged, 6 were recovered; 19 improved; 10 unimproved; 4 were inebriates, and 3 cases terminated in death. The percentage of recoveries on the number admitted was 17.

NEW JERSEY:

Second Annual Report of the State Asylum for the Insane, Morristown: 1877. H. A. BUTTOLPH, M. D., LL. D., Superintendent.

The number of patients in the Asylum October 31, 1876, was 342; admitted during the year, 180; discharged—recovered, 27; improved, 21; unimproved, 1; and 28 died. The percentage of recoveries upon admissions is but 15. This is owing to the large proportion (about two-thirds of all admitted) of chronic cases sent to the Institution since its opening.

Noticable in the Doctor's brief report are his earnest expressions regarding the importance of studying regional brain pathology in connection with the symptomatology of insanity.

Annual Report of the New Jersey State Lunatic Asylum, Trenton: 1877. JOHN W. WARD, M. D., Superintendent.

The year began with 472 patients, and during the year 181 were admitted. There were discharged—recovered, 61; improved, 30; unimproved, 5; escaped, 3; not insane, 1; and 43 died. The percentage of recoveries on admissions was 33.7.

In 1869 the Legislature authorized the transfer of the convict insane of the State Prison to this Institution,

which now contains thirty of that class. This leads the Managers and Superintendent to make some suggestions regarding a separate establishment for such cases. There is no question but that it is wrong to mingle the convict and criminal insane with the ordinary cases of insanity, and the success of a separate institution for those classes in the State of New York, ought to assure this provision in every State.

PENNSYLVANIA:

Annual Report of the State Hospital for the Insane, Danville:
1877. S. S. SCHULTZ, M. D., Superintendent.

There were in the Asylum at the beginning of the year, 311 patients; admitted during the year, 120; discharged—recovered, 32; improved, 22; stationary, 31; not insane, 2; and 21 died. The percentage of recoveries on admission was 26.6.

The average weekly cost per capita was \$4.47.

The Institution is still unfinished, and an appropriation of \$90,000 is asked to allow of the completion of the South wing.

The Doctor calls attention to the disastrous consequences that not infrequently result from the removal of patients before they are recovered, and against the advice of the medical officers, and gives the following instance. "One Tuesday a patient was removed by the Director of the Poor who had committed him. On the following Saturday he killed his wife with an axe. The Hospital was not responsible because it had no power to enforce its advice."

Dr. McLaughlin, who had been First Assistant Physician for three years, resigned on account of ill-health.

Dr. Massey was promoted to that position, and Dr. Seip appointed Second Assistant.

Annual Report of the Commissioners of the State Hospital for the Insane, Warren: 1877.

The work upon this Institution has been delayed by insufficient appropriations, and it is now thought by the Commissioners that it will not be ready to receive patients before the summer of 1879. The appropriation asked for the coming year is \$200,000. "The Commissioners desire particularly to call attention to the fact that while the original estimate of the cost of the building did not include fire-proofing, they have thus far arranged for making it strictly fire-proof in every part, and they expect to complete it in that way; and while that adds very much to the cost they are confident of their ability to complete the whole structure at a much less sum than the original estimate." Four oil-wells have been put down on the Hospital farm, and the amount thus far obtained as the share to which the State is entitled is eleven hundred and sixty-eight barrels.

Report of the Pennsylvania Hospital for the Insane, Philadelphia: 1877. THOS. S. KIRKBRIDE, M. D., Superintendent.

At date of the preceding report there were 414 patients in the Institution; during the year, 236 were admitted and 235 discharged. Of the latter, 102 were cured, 11 much improved, 49 improved, 38 stationary, and 35 died. The total number admitted since the opening of the Institution is 7,663; the number discharged is 7,248; leaving 415 in the Hospital at date of report. The percentage of recoveries on the number admitted during the past year is 43.22.

The weekly cost per capita was \$8.87.

The Doctor congratulates the country upon the general interest manifested in the insane, and Pennsylvania in particular upon the liberal appropriations made by

the Legislature for extending the work on the asylums at Danville and Warren, and in providing for a new hospital in the south-eastern district, appropriating the entire amount supposed to be required for its completion. Here is an example worthy of consideration by other Legislatures. Money so appropriated can be used to the best advantage in economical construction, and by providing thus for the most rapid completion, the great object, the *use* of the Institution for its beneficent purpose is most speedily secured. In his able and interesting report the Doctor discusses some of the errors and tendencies to error regarding provision for and the management of the insane. He holds no doubtful views, and gives his conclusions clearly and forcibly, based upon his long and large experience with the insane. While he holds it to be the duty of those who have had large experience to give their opinions, he also believes it to be important to frequently contradict what is erroneous, but leave to those who promulgate or adopt ideas, without having taken the trouble to make adequate examination, the responsibility for their own errors and defects. As to the separation of the chronic from recent cases of the insane, he thinks the former can not be properly provided for at a cost materially less than the latter; and that whatever reduction is made in providing for them separately, is at the expense of a comfortable style of habitation, care in its construction and cheerfulness in its surroundings, pure air, warmth and ventilation, quality of clothing and food, cleanliness, supervision and sympathy. He does not believe that the chronic insane can, with propriety, be made by their labor to contribute very largely to their own support, because all insane are really sick, and, unless properly regulated, labor is as liable to do harm as good. Many are scarcely

competent to know or to complain when they suffer, and intelligent supervision and care are necessary.

As to hospitals being conducted "without restraint," he declares there is no such thing, and can not be; that a certain amount of mechanical restraint is necessary, but when required, is a question for decision by the medical officers who direct the treatment. No outside commission nor any non-professional board is competent for such a duty.

Notwithstanding all the sentimentalism regarding "bolts and bars," the Doctor would make proper provision for security in all parts of a building to be occupied by the insane, especially since this can be done without being in any sense offensive. Having made this provision, each superintendent may use his discretion as to whom he will give more freedom, for whose safety he will assume responsibility.

Although in an unguarded and unprotected building no very serious accident may occur for a long time, the propriety of such an arrangement is not determined. "It is more than likely that, when least expected, there will be a list of occurrences that will excite, and not without cause, a storm of public indignation, because ultra humanitarian theories have been allowed to take the place of the dictates of common-sense and the conclusions of general experience." He denies, as utterly without foundation, such statements as that American hospitals are not progressive—that their officers do not advocate improvements—that they are "in ruts" and deficient in knowledge of what is being done elsewhere; or that American institutions, which only a few years ago were conceded to be in the advance, have lately been taking a retrograde position. After referring to the large number of hospital physicians of this country who have made personal examination of European in-

stitutions and reports thereon, and to the few practical men from abroad who have visited our institutions or given them careful examination, he says:

It must be confessed, too, that some of our own countrymen, not specially connected with the care of the insane, when abroad have given a so much closer study to what has come under their notice, than they had ever thought of doing to our own institutions, that they have been unconsciously led to adopt views in regard to relative management, supervision and treatment not justified by the facts, and to give an exaggerated importance to opinions doubtless new to them, but which had really been carefully studied and placed at their just estimate years before by the large body of hospital superintendents, to whom they had long since ceased to have novelty.

Many of the statements just referred to, were certainly made without sufficient investigation, and with all allowance for their other objects, it would require a large amount of charity to believe they have not been circulated also for the purpose of creating a feeling of distrust, and to prevent the common-sense of communities from resorting to its usual sources for counsel and advice when making further provision for the insane.

While he protests against all waste, extravagance or useless ornamentation, he evidently does not approve of *cheap* structures, holding that the best hospital, best built, best arranged and best managed is always cheapest in the end. He deprecates one-storied buildings, cottages, detached houses scattered over a large extent of ground, and the separation of different wards by inconvenient distances.

In regard to detached wards and cottages, the experience of this hospital, began for the first, in 1842, just after its opening, and for the latter in 1847. It took but little time, in both cases, to discover that neither was desirable, and that both had many disadvantages. The intervening spaces between the detached wards were gradually filled up by permanent structures, to the great comfort and convenience of everybody; and the one cottage, which it was originally supposed would soon be followed by many others, never had its duplicate, and was finally abandoned for the

purpose for which it was first intended. The use of the term cottage, so frequently employed of late, has seemed to have something of a false pretence about it, and to be used to cajole unsuspecting inquirers into a belief that it is somewhat like the poetical structures in which most people have, at some period or other of their lives, felt a disposition to live. What then must they think, when told that it is really used for all sizes of houses with from 20 to 200 rooms, and that in these, what is pleasantly styled the "family system," large as the family is, is to be tried.

It is scarcely necessary, in this connection, to refer in detail to these so-called cottages, but it can hardly fail to excite some surprise to find such frequent reference made of late to "cottages to contain 200 patients, and each to cost \$100,000." Each of these would seem actually to be a hospital in itself, the number of patients to be provided for being about as many as that originally suggested for such institutions by the Association of Hospital Superintendents.

It is an error to suppose that insane persons scattered about a farm in detached buildings can be as efficiently cared for, when thus entrusted to comparatively irresponsible attendants, as they would be in the regular wards of a hospital, under the immediate oversight of the officers of the institution.

As a general rule the insane are poor sleepers and the association of large numbers in dormitories interferes more or less with their rest, as well as with their safety.

On mere doctrinaires he says:

It is very clearly a tendency to error to inculcate the doctrine that a familiarity with insanity, and the care of the insane, and with the construction of hospitals, gives no advantages for deciding upon the best mode of providing for their custody and treatment. It would seem to be a work of supererogation to discuss such a proposition as this, and yet it has lately been advocated and practically acted on, in more than one quarter, claiming the right to influence public opinion, and to control the expenditure of the public money.

He declares that the complaint of inability to provide adequately for the insane, comes from too small a number to warrant their claim to represent "public sentiment." The great mass of tax-payers have not made

such complaint. "No State was ever yet impoverished by her expenditures for such an object. With all the insane properly provided for in good hospitals the people of any State will feel richer, and as holding a more dignified position among men, than if they allow their afflicted fellow-beings to live in receptacles that are a reproach to humanity."

Annual Report of the Western Pennsylvania Hospital for the Insane, Dixmont: 1877. JOSEPH A. REED, M. D., Superintendent.

The number of patients in the Hospital September 30, 1876, was 482. During the year, 239 were admitted, and there were discharged—recovered, 60; improved, 55; unimproved, 17; and 46 died. The percentage of recoveries on admissions was 25.1.

The President of the Board of Managers calls attention to the fact that the Legislature at its last session, failed to make an appropriation to assist in supporting the public patients who form a large proportion of its inmates. "When you consider that of 721 patients under treatment during the past year, fully 600 were State patients; and that of the 543 now in the Hospital, 443 are of that class, you will readily understand that the Institution necessarily sustained a great loss in maintaining these, costing as they do \$4.81 each per week, while it receives from the counties and townships, but a fraction over \$3.00 per week. The Institution has no endowment fund or other source of revenue, from which to make up this loss, and if State aid is withheld, there is no alternative but to exclude this class, or to exact from the counties the full cost of their support."

"The Institution has crowded into its several apartments fully 150 patients more than they are intended

to accommodate." "It may not be known that the managers of this Institution, nearly thirty years ago, impressed with the neglected condition of the indigent insane of Western Pennsylvania, and observing that no other provision was made for their care than that afforded by jails and poor-houses, organized this Department; and at the suggestion of Governor Pollock, in his message to the Legislature in 1856, generous assistance was extended to the Institution to enable it to carry on with increased effort its humane work. The present well-appointed and commodious structure at Dixmont, was erected and from that time to this the Institution has fully done its part in providing for the insane poor of the commonwealth."

Sixty-First Annual Report of the Asylum for the Relief of Persons Deprived of the Use of their Reason, Philadelphia: 1877-8.
JOHN C. HALL, M. D., Superintendent.

At date of last report there were 77 patients in the Institution; 37 have been admitted and 30 discharged. Of the latter, 8 were restored, 4 much improved, 3 improved, 12 stationary, and 3 died.

The weekly cost per capita was \$8.89.

In December, Dr. Joshua H. Worthington, who had long been Superintendent of the Asylum resigned, and Dr. Hall was appointed his successor.

MARYLAND:

Annual Report of the Maryland Hospital for the Insane, Catonsville: 1877. JOHN S. CONRAD, M. D., Superintendent.

The number of patients at the beginning of the year was 198. During the year 210 were admitted and 127 discharged. Of the latter, 54 were cured, 41 improved, 13 unimproved, and 19 died. The percentage of recoveries on the number admitted was 25.7.

From the Managers report we learn that the act organizing the new hospital was passed in 1852. The successive appropriations for its erection, and the proceeds of the sale of the old hospital reached in 1876 the sum of \$987,318.67, and "not more than 325 patients, at the utmost, can be cared for in the present building." This shows an expense per capita of \$3,038.00. Notwithstanding this the Managers regret that they "should so soon have had occasion to apply any part of our limited appropriation to the renewal of work connected with the construction of a building that has so recently been erected." They speak of the heating apparatus as being unsatisfactory, and of "the work done in the bath-rooms, where the plumbing, originally of a most inferior quality, had given way and had to be renewed in both wings and part of the center building." The Managers and Superintendent maintain "that it is impolitic and wrong to place insane criminals, and those who have led a life of immorality, in the same rooms, wards, or even establishment, with the honest, virtuous and untainted patients." We admit the propriety of establishments for insane criminals, but the test of moral or immoral lives as applied to the insane generally, would hardly be a feasible one in this or any other country.

Dr. Conrad represents the cost per capita for the past year at \$246, or \$4.73 per week. This is seventy-three cents more per week than the cost to the counties for the care of the insane poor in the State Hospitals in New York. The Doctor refers to ophthalmoscopic examinations made by Dr. Joseph A. White, in the Asylum. These tend to confirm the deductions of Dr. Henry D. Noyes, of New York, who made investigations into this subject, at the Asylum at Utica, in 1871.* As Dr. Conrad refers to Wakefield and not to

* AMERICAN JOURNAL OF INSANITY, Vol. xxviii, No. III, January, 1872.

Dr. Noyes, he probably has not seen the article referred to in this JOURNAL. The necessity for further provision is dwelt upon and the question discussed as to enlarging the present building or putting up a separate one.

Thirty-Fifth Annual Report of the Mount Hope Retreat, Baltimore: 1877. WM. H. STOKES, M. D., Attending Physician.

The "Retreat" began the year with 301 patients. The admissions numbered 102, and 89 were discharged. Of the latter, 46 were restored, 25 improved, 2 unimproved, and 16 died. The percentage of recoveries on admissions was 46.

The Doctor has classified the recoveries of the year as to duration before admission; and the result shows clearly the importance of early treatment. "At least seventy per cent of all recoveries which have taken place has been in cases which had been of less duration than three months before admission; about twelve per cent in cases of between three and six months duration, and six per cent in cases of between six and twelve months duration, making an aggregate of eighty-eight per cent of all recoveries occurring in patients who had been insane less than one year before admission."

NORTH CAROLINA:

Report of the Insane Asylum of North Carolina, Raleigh: 1877. EUGENE GRISSOM, M. D., Superintendent.

The number of patients at the close of the year was 264; admitted during year, 53; discharged—recovered, 13; improved, 8; unimproved, 3; and 15 died. The percentage of recoveries on admissions was 24.52.

The weekly cost per capita was \$4.85.

During the year covered by this report the Institution has suffered greatly, owing to diminished appro-

priation by the State Legislature. With a capacity of but 224, it has been obliged to care for 278 patients; and "there are at present more than two hundred pressing applications for admission." The embarrassment under which the officers labor at present will doubtless be but temporary; for with all the resources of North Carolina, that State must soon be in a position to make full and proper provision for all its insane poor.

SOUTH CAROLINA:

Fifty-Fourth Annual Report of the South Carolina Lunatic Asylum, Columbia: 1877. J. F. ENSOR, M. D., Superintendent.

The number of patients at the beginning of the year was 272. There were admitted during the year, 169; and discharged—recovered, 56; improved, 3; stationary, 31; and 45 died. The percentage of recoveries on admissions was 33.13.

The weekly cost per capita was \$3.83.

Dr. Ensor labored under many and serious disadvantages, as will be seen from the following quotations from his report: "Our water supply is totally inadequate, our bathing arrangements are imperfect, our dining accommodations are extremely inconvenient, our facilities for classification are almost *nil*, and our water-closets are a disgrace to the Institution." Speaking again of the water supply he says: "In case of fire, we would be perfectly helpless." "We have but two dining-rooms, and they are in the back-yard, detached some distance from the main building. All our patients, except a few whose meals are served in their rooms (at great inconvenience), are obliged to come down and herd together at meal-time. The meals of colored patients have to be carried in trays and pans more than a hundred yards in the open air." As to these things, the Doctor makes suggestions which should be heeded at once. There

are less than twenty acres of tillable land connected with the Institution. The Doctor wants a hundred at least, to afford the patients "pleasant occupation in the open air, which constitutes one of the most useful means of restoring comfort and contentment." The Asylum is now too public, the patients being subjected to many annoyances whenever they go out for pleasure or recreation. The Doctor proposes a plan which will remedy all these things, and which we trust will be carried out, for the Institution is surely in a bad way.

MISSISSIPPI :

Annual Report of the State Lunatic Asylum, Jackson: 1877.

WM. M. COMPTON, M. D., Superintendent.

The number of patients at the beginning of the year was 336. During the year, 108 were admitted and there were discharged—recovered, 35; improved, 1; and 17 died. The percentage of recoveries on the number admitted was 32.4.

The weekly cost per capita was \$3.23.

The Doctor gives a brief retrospect of the progress of the Institution—beginning with the proposition of Gov. Brown, in his message in 1846, to build an Institution in that State. This was not seconded by the Legislature, and in 1848 he "renewed his recommendation, and suggested that *three thousand dollars* would be sufficient to accomplish the purchase. The Legislature appropriated \$10,000. In 1850, with the aid of Miss Dix, the commissioners secured an appropriation of \$50,000. "The whole establishment was completed on the 8th day of January, 1855, upon which day the first patient (still an inmate of the Asylum) was admitted." The original building, consisting of the center and the wings, cost the round sum of \$175,000. The Doctor gives the memorial presented by Miss Dix to

the Legislature in 1858, when it became necessary to enlarge the building.

LOUISIANA :

Annual Report of the Insane Asylum, State of Louisiana, Jackson : 1877. J. W. JONES, M. D., Superintendent.

The number of patients at the beginning of the year was 176. During the year, 54 were admitted and 36 discharged. Of the latter, 13 were recovered, 1 improved, 1 eloped, and 21 died. The percentage of recoveries on admissions was 24.

The weekly cost per capita was \$2.44.

TEXAS :

Report of the Texas State Lunatic Asylum, Austin : 1877. D. R. WALLACE, M. D., Superintendent.

The number of patients in the Asylum, September 1, 1876, was 198. There were admitted during the year, 137; and discharged—restored, 43; improved, 28; unimproved, 4; incurable, 9; and 21 died. The percentage of recoveries on the number admitted was 31.38.

Dr. Wallace reports the garden as three times destroyed—by frost, grasshoppers and hail—thus depriving them for a time of the necessary vegetables. The pressure upon the Institution prevents them from receiving all applicants, and the preference given under the law to public patients has compelled the Doctor to advise those who are “able to incur the expense of going to some private asylum in a distant State,” to do so. He expresses the hope that the Legislature will relieve this condition of things as soon as the finance of the State will admit. The appendix contains the law regarding the Asylum.

KENTUCKY:

Annual Report of the Central Kentucky Lunatic Asylum, Anchorage: 1877. C. C. FORBES, M. D., Superintendent.

In this Institution separate provision is made for colored patients, and in the report they are tabulated separately. Of the white population, there were 294 at the beginning of the year; 112 were admitted; 56 were discharged, of whom 41 were recovered, 14 improved, 1 not improved, 1 escaped, and 35 died.

In the colored department, there were 75 at the beginning of the year; admitted during the year, 34; discharged, 14. Of the latter, 9 had recovered, 2 were not improved, and 3 died. The percentage of total recoveries on total admissions was 34.

Weekly expense per capita, both departments, \$3.46.

A striking and unfortunate feature of the report, though required by law, is the publication of the name of each patient. We can not conceive the motive for such a provision of law, and the Doctor very properly remarks that it has always seemed to him "extremely deprecable, as effecting no conceivable good, but as working a hardship and mortification in the cases of many."

Annual Report of the Western Kentucky Lunatic Asylum, Hopkinsville: 1877. JAMES RODMAN, M. D., Superintendent.

The number of patients remaining, November 1, 1876, was 334. During the year, 75 were admitted and 63 were discharged. Of the latter, 27 were restored, 5 improved, 4 unimproved, 2 eloped, and 25 died. The percentage of recoveries on admissions was 36.

The Superintendent and Commissioners suggest the necessity for additional buildings to increase the capacity of the Institution. In this report, also, we find the disagreeable "roll of inmates."

OHIO:

Thirty-Ninth Annual Report of the Columbus Hospital for the Insane: 1877. RICHARD GUNDRY, M. D., Superintendent.

From August 23, 1877, to November 15, 1877, there were admitted, chiefly by transfers from other institutions, 823 patients; 5 were discharged recovered and 3 died; leaving 815 at close of the year.

Twenty-Third Annual Report of the Cleveland Hospital for the Insane: 1877. JAMIN STRONG, M. D., Superintendent.

The number of patients in the Hospital, November 15, 1876, was 565. During the year, 286 were admitted, and 300 discharged. Of the latter, 73 had recovered, 101 were improved, 90 unimproved, 1 not insane, and 35 died. The percentage of recoveries on admissions was 24.33.

The weekly cost per capita was \$3.42.

Twenty-Third Annual Report of the Dayton Hospital for the Insane: 1877. L. R. LANDFEAR, M. D., Superintendent.

The year began with 604 patients, and during the year 171 were admitted. There were discharged—recovered, 79; improved, 14; unimproved, 23; transferred to Columbus Hospital, 172; and 49 died. The percentage of recoveries on admissions was 46.19.

The weekly cost per capita was \$3.75.

Fourth Annual Report of the Athens Hospital for the Insane: 1877. H. C. RUTTER, M. D., Superintendent.

The number of patients at the beginning of the year was 659. There were admitted, 297; and discharged—recovered, 125; improved, 11; stationary, 12; transferred to Columbus Hospital, 216; and 43 died. The percentage of recoveries on admissions was 42.1.

The weekly cost per capita was \$3.72.

Eighteenth Annual Report of the Longview Asylum. W. II.
BUNKER, M. D., Superintendent.

The number of patients in the Asylum at the commencement of the year was 613. The number received during the year was 180. There were discharged—recovered, 57; improved, 33; unimproved, 4; not insane, 1; and 53 died. The percentage of recoveries on admissions was 31.66.

The weekly cost per capita was \$3.14.

The first four institutions in this series belong to the State; the latter, "Longview," is for the insane of the county of Hamilton, which includes the city of Cincinnati.

In 1868 the "Central Ohio Lunatic Asylum" was burned, and early in the following year an act was passed by the Legislature to provide for its erection, and ground was broken on the former site in October, 1869. The plan was finally changed; the old grounds were sold and a new site purchased. The building was begun with the idea of making its capacity 400, but was finished with a capacity of 902, at a cost of nearly a million and a half. The name was changed to "Columbus Hospital for the Insane." It "stands on an elevated plateau, facing eastward, with about eleven hundred feet frontage in a direct line. It is built of brick trimmed with freestone. It comprises a central or administration building and three wings, one on each side and one in the rear of the administration building. The whole structure is four stories in height, except some portions of the wings which are of three stories." The entire building is fire-proof, the only wood being in the door and window casings. Notwithstanding the State is so well provided with asylums for the insane, Dr. Strong estimates that there are yet a thousand in the State that can not be given

proper asylum accommodation. Dr. Gundry thinks there should be an institution especially for the criminal and convict classes of insane, and that there should be a separate institution for epileptics likewise. Dr. Landfear also advocates the latter.

WISCONSIN:

Fifth Annual Report of the Northern Hospital for the Insane, Oshkosh: 1877. WALTER KEMPSTER, M. D., Superintendent.

There were 503 patients in the Asylum, September 30, 1876. During the year 201 were admitted, and there were discharged—recovered, 40; improved, 36; unimproved, 49; and 42 died. The percentage of recoveries on admissions was 19.4.

In the 201 patients admitted, only 30, or 18.9 per cent, were found to have a history of heredity.

Considerable improvements have been made during the year. "Although our capacity has been largely increased, we have, during a part of the year, been crowded."

The Managers recommend the appropriation of \$190,000 to enable them to build "four additional wings, which, when completed, will accommodate 414 patients. With an appropriation of that sum, all the insane of the State may be provided with a comfortable home." The Doctor's report is chiefly devoted to remarks on the "legal relations of the insane." The appendix contains a compilation of the State laws regarding the insane.

IOWA:

Third Biennial Report of the Iowa Hospital for the Insane, Independence: 1877. A. REYNOLDS, M. D., Superintendent.

The number of patients in the Hospital, November 1, 1875, was 251. There were admitted during the

biennial period, 430. Of those discharged, 92 were recovered; 129 improved; 72 unimproved; and 66 died. The percentage of recoveries on admissions, was 21.3.

In this report, also, the Superintendent dwells upon the necessity for a great increase in hospital provision for the insane. He reports more chronic cases admitted than formerly. "No doubt the hard times have compelled many thus to part with their friends." "Whether the proportionate number of the insane to the whole population is increasing, is a question still undecided."

MINNESOTA:

Eleventh Annual Report of the Minnesota Hospital for the Insane, St. Peter: 1877. CYRUS K. BARTLETT, M. D., Superintendent.

The number of patients at the beginning of the year was 530. There were admitted, 237; and discharged—recovered, 81; improved, 45; stationary, 19; not proper subject, 1; and 42 died. The percentage of recoveries on admissions, was 34.1.

The weekly expense per capita, was \$3.75.

In speaking of the chronic class the Doctor says:

Theoretically it might seem that quiet and apparently harmless patients could be cared for at an ordinary receptacle for the poor; but *practically* we know they are not in States where it is supposed the highest intelligence, aided by wealth, and the keenest moral feelings exist.

Time has not changed the views expressed in the report of 1875, as to the proper manner of providing for all the insane wards of the State. Without repeating, in full, the language then used, the conclusions may be briefly stated, viz.: That the chronic and acute cases should be treated together, and that special accommodations of moderate size and cost be provided for all needing care and treatment, and within easy access of the centers of population, long journeys not only *increasing* greatly the expense of transportation, but *decreasing* the probabilities of early application for

treatment, and while the disease is in its most curable form. The cost of removing a patient more than one hundred miles, if accompanied by an officer and attendant to the hospital, and by a friend in returning, is more than the actual expense of support during the average time of treatment of recent cases.

NOTICES OF BOOKS, PAMPHLETS AND JOURNALS.

Lectures on Medical Jurisprudence. By FRANCIS OGSTON, M. D., Professor of Medical Jurisprudence and Medical Logic in the University of Aberdeen. Edited by Francis Ogston, Jr., M. D. Philadelphia: Lindsay & Blakiston, 1878.

In the preface, the Editor announces that these Lectures are published "in the hope that they may supply the long felt want of a work containing the various forms of Scottish medico-legal procedure, but though thus intended primarily for Scottish practitioners no pains have been spared to fit them for a wider sphere by the addition of the legal forms in use in England and other countries, where these have been found to differ from those of Scotland." The Lectures treat successively of Medical Evidence, Age, Sex, Personal Identity, Impotence and Sterility, Defloration, Rape and Sodomy, Pregnancy, Delivery, Birth, Criminal Abortion, Infanticide, Insanity, Feigned Diseases, Death, Medico-Legal Inspections, Homicide, Wounds, and General Toxicology. The appendix contains "Certificates of Insanity" and "Various Forms of Medico-Legal Reports." The work contains 662 pages. It is written in a clear and pleasant style, and we are glad to see this valuable addition to the literature of this subject. In the portion devoted to Insanity (fifty-seven pages), there appears a lack of definiteness and positiveness which seems to arise from the Author's belief that "it has still to be settled by the medical psychologist, whether he is prepared to adopt exclusively the psy-

chical or the somatic theory of insanity, or to fall back on the intermediate one." The classification adopted is, "with some modifications, the arrangement suggested by Dr. Ray, based upon that of Pinel as modified by Esquirol." We dissent from any plan which accepts the dogmas of *moral* and *partial* insanity.

Forensic Medicine and Toxicology. By W. BATHURST WOODMAN, M. D., F. R. C. P., Assistant Physician to the London Hospital, &c.; and CHARLES MEYMOTT TIDY, M. B., F. C. S., Professor of Chemistry and of Medical Jurisprudence and Public Health at the London Hospital, &c., with eight full page lithographic plates, and one hundred and fifteen other illustrations. Philadelphia: Lindsay & Blakiston, 1877.

This work is throughout a joint production of the two Authors. "It claims to be simply a comprehensive Medico-Legal Handy-book. It deals with the medical rather than with the legal. The Authors have felt that lawyers know the legal aspect of the subject better than physicians, while physicians know the medical better than lawyers." The first chapter is upon Courts, Medical Evidence and Fees of Medical Men; the second on Post Mortem Examinations, and the third on Signs of Death. The next fifteen chapters are upon Poisons, and these are arranged in a very systematic and convenient method—giving a description of each poison, its doses, &c., the result of experimentation on animals—its symptoms—treatment—post mortem appearances and tests, each under different heads. The next chapter is on Hairs, Fibers, Stains, Examination of Blood, &c. Chapter XX is on Life Insurance; XXI on Vision, Sounds, Personal Identity, &c., and the five chapters following are on Monsters, Defects, Pregnancy, Malpraxis, Rape, Abortion, Infanticide, &c. Chapter XXVII is on Unsoundness of Mind. The next two are upon the varieties of Death, and on the effects of Heat and Cold. The

last chapter discusses Mechanical Injuries. The work is well written and arranged with unusual convenience for reference. The Authors adopt, without reserve, the theory of monomania and moral insanity, and carry their classification to the absurd minutiae of Skae's system. They point out in a very clear manner the points of difference between the doctrine of the Courts and the medical and scientific views of responsibility in the insane.

*Case of Unilateral Cerebellar Abscess and Tumors without Persistence of Symptoms. Remarks on Unilateral Disease of the Cerebellum. Other Cases Cited.** By C. H. HUGHES, M. D., Late Superintendent and Physician Missouri State Lunatic Asylum.

We give below such extracts as refer to the case which came under Dr. Hughes' notice. The remainder of the article discusses other cases, and the opinions of various authors. The entire paper was published in the *Journal of Mental and Nervous Diseases*, October, 1877.

Jacob Schoene, in September and October of 1872, first came under the treatment of Dr. J. H. Hewitt, a reputable and skillful physician of Summerfield, Ills. He then had malarial fever and obtained prompt relief, requiring no further treatment until February 22, 1873, when the doctor treated him for *neuralgia cerebri* of malarial origin. Schoene suffered more or less from pain until the 17th of the following March. He was prescribed for twice in the succeeding April, and on the 1st, 4th, 8th and 10th of May, and the 13th and 15th of June for the same trouble. The last prescriptions made by Dr. Hewitt were on September 7, for an

* Read before the Association of Superintendents of American Asylums for the Insane, at St. Louis, May 31, 1877.

attack of remittent fever, and September 21 for pain in the head. He had been treated also by a homœopathist of this city. He came under my observation October 31, 1876, and remained with me, except the two days he was gone to vote, until he died, on the 13th of the following November.

Three weeks before coming under my treatment, he was much out of his head. He became wild and delirious, and engaged in an imaginary fight with his wife and boy, taking down his gun from over the door to shoot them, saying he must defend himself. He had but a confused remembrance of the fact afterwards. He complains of a sound as of hissing steam in his ears.

When we first saw him he had headache, staggering and vertiginous sensations, some hesitancy in comprehension and speech, a slow, full, regular pulse, and drowsiness, but only the exaggeration of the occipital pain and the pulsation served to locate the trouble in the cerebellum. Clearing the bowels twice daily and restoring the depressed brain circulation by proper medication, dispelled all the symptoms. To such an extent did he improve that he went, free from all pain or other head-symptoms, to his home in Bloomfield, Ills., to vote for President, whence he returned, after two days' absence, only to die of the extensive and not recently formed abscess and tumors shown in the diagram and brain before you. On the night following the last presidential election, he went down town in the cars to see the returns as they were announced in the different city newspapers, and was much interested but not at all abnormally excited. He had a history of malarial poisoning which led to the administration of ten grains of quinia, and a fortieth of a grain of arsenious acid each morning.

After he had been a short time under treatment, he went, unaccompanied by any one, about the city, some-

times walking considerable distances, and getting on and off the street cars without help.

His gait was not shuffling, nor had he at any time in his history the slightest sign of motor paralysis.

During the paroxysms of most severe suffering, there was inability, without external aid, to entirely control the muscular movements essential to the maintenance of equilibrium. He could walk when supported at the elbow by a friend, and minister to his wants in any way in which the arms or hands serve us, though he was sometimes tremulous in attempting to convey food to his mouth. He could feed himself, wash his face and hands, robe and disrobe, etc. It was the balancing power which failed him.

His sexual appetite was neither absent nor inordinate, so far as we could discover. His mind was clear up to the hour of his death, and a few hours before that event he walked, though somewhat clumsily, about his room. A few minutes before he died he sat up in bed, clasping his hands to his head and crying out with intense pain. Until the last agony, we had always relieved him with applications of sulphuric ether to the top and back part of the head. He became comatose without convulsion or other premonition, and fell back on his pillow and in a few moments expired.

The history tends to confirm the view that the whole cerebellum is not necessary to perfect voluntary muscular coördination, and to excite the reasonable suspicion that the hemispheres, and parts of a single hemisphere, may, under certain circumstances, perform a vicarious function. And why, in the wonderful economy of Nature, always conservative of vital function and power as we know Nature to be, should it not be the case here as it is in the lungs and kidneys, the eyes and ears, and in the hemispheres and probably some of the convolutions of the cerebrum.

The superficial wall of the abscess had probably suddenly given way. On removing the cerebellum, pus and serum escaped through a small opening in the membrane not caused by laceration or scalpel puncture.

The abscess occupied the lower half of the left hemisphere of the cerebellum, extending forwards and upwards, so as to obliterate all traces of the corpus dentatum, and backward and downward, so as to communicate with an apoplectic cell, about the size of a hazel-nut, filled with serum. This cell extended from the surface through the arbor vitæ arrangement, and opened into the abscess.

The cavity of the abscess was immediately above and contiguous to the organized apoplectic cyst, located just beneath the arachnoid membrane, and occupying the striated structure at the extreme posterior inferior part of the left cerebellar hemisphere, and just within the median line.

This organized blood-clot was about the size and shape of a butter-bean.

The apoplectic products did not invade the right hemisphere. The abscess did not implicate any part nearer the middle of the tuber annulare than one and a quarter inches, and of course did implicate the crus cerebelli. The cavity of the abscess was large enough to envelope a large-sized almond, and was filled with pus.

A careful examination revealed no lesion of the cerebrum.

The weight of the brain, including the pons varolii, medulla and oblongata and membranes, was forty-eight ounces and a half. The weight of the cerebellum, medulla and pons, after evacuating the abscess and cell of their pus and serum, was four and one-half ounces.

The opposite cerebellar hemisphere appeared neither congested nor in any other manner diseased.

In the case of Schoene it can not be maintained that the course of treatment pursued had any possible restorative influence on the cyst, the organized clot or the abscess. The symptoms were plainly attributable to the disturbed cerebral and cerebellar circulation, for its restoration dissipated for a time all evidences of disease.

This and the other recorded examples of unilateral cerebellar disease, without corresponding physiological disturbance persisting, compel us to concede to the opposite sides of the cerebellum, and perhaps to other portions within the same hemisphere, under gradually invading disease, the probability of vicarious power.

The treatment adopted being unknown twenty years ago, suggests the reasonable presumption that the results in some of Andral's cases might have been different had the power of the bromides and other agents in regulating and controlling intra-cerebral capillary states, been then as well understood as now.

The facts thus far collected may not be deemed sufficient to sustain the view that the cerebellar hemispheres are capable of a dual action, and under certain circumstances of vicarious function, but all the facts harmonize with the conjecture, and they are equally as numerous as those which support a similar view respecting the hemispheres of the cerebrum.

Malaria and Struma in the Etiology of Skin Diseases. By L. P. YANDELL, Jr., M. D.

In this little pamphlet, Dr. Yandell gives his views upon the influence of Malaria and Struma, particularly in the causation of skin diseases, his conclusions being that "Malaria is the chief source of acute skin disease; Scrofula is the chief source of chronic skin disease." Coming from a man of such ability and experience these views are worthy of consideration.

We recently received the following notice of a new English Journal:

Brain: A Journal of Neurology. Edited by Drs. BUCKNILL, CRICHTON-BROWNE, FERRIER, and HUGHLINGS-JACKSON.

The editors of *Brain* make no apology for adding another to the already long list of British scientific journals. The want has been long felt of a periodical devoted to the discussion of the undermentioned subjects, not yet adequately represented in existing medical and scientific serial literature.

On the Continent and in America there are many journals which treat specially of Diseases of the Nervous System, but in this country, although in addition to the ordinary medical periodicals we have journals dealing with Mind and Mental disease, there are none which include in their scope all that relates to the Anatomy, Physiology, Pathology and Therapeutics of the Nervous System. These will form the subject-matter of *Brain*—a title not intended as restrictive, but as representative of the whole Nervous System, peripheral and central, as the sub-title, *Journal of Neurology*, indicates. The functions and diseases of the nervous system will be discussed, both in their physiological and psychological aspects; but mental phenomena will be treated only in correlation with their anatomical substrata, and mental disease will be investigated as far as possible by the methods applicable to nervous diseases in general.

The Original Articles will consist mainly of Clinical and Pathological Records, and Anatomical and Physiological Researches, Human and Comparative, on the Nervous System.

Signed Critical Digests and Reviews of Clinical, Experimental, and other Researches in this department

of science, both at home and abroad, will also be furnished by an able staff of contributors.

Space will also be devoted to Foreign Correspondence on matters relating to Neurological Science in its theoretical and practical aspects.

It will be the object of *Brain* to keep its readers well abreast of modern progress in Neurology, and to advance the knowledge of a class of diseases respecting which, it is universally admitted that much has yet to be learnt.

The best guarantee of the adequate fulfillment of this programme will be found in the subjoined list of the names of those who have promised their support to *Brain*.

Drs. Clifford Allbutt, Aldridge, Althaus, McCall Anderson, and Charlton Bastian, MM. Bourneville and Boyer, Drs. Broadbent, Launder Brunton, and Buzzard, Professor Charcot, Mr. Crochley Clapham, Drs. Lockhart Clarke, Joseph Coats, Coghill, Davidson, E. H. Dickinson, and Dreschfeld, M. Duret, Drs. Fothergill, Ling Fox, and Gowers, Mr. Jonathan Hutchison, Drs. Ireland, Kesteven, Klein, Lawson and Bevan Lewis, Mr. Thomson Lowrie, M. Magnan, Drs. Mahomed, W. Moxon, and Marie, M. Pitres, Dr. Laidlaw Purves, Dr. A. Rabagliati, Mr. W. G. Romanes, Dr. James Rory, Dr. James Ross, Professor Sanders, Dr. Burdon Sanderson, Dr. Savage, Dr. Lewis Shapter, Profs. Grainger Stewart, and W. Stirling, Dr. Octavius Sturges, Dr. W. I. Treutler, and Professor Turner.

—We have received the first number of a new publication, entitled "*The Journal of Physiology*," Edited by Michael Foster, M. D., F. R. S., Trinity College, Cambridge, with the co-operation in England of Prof's Gamgee, Rutherford and Sanderson, and in America of Prof. Bowditch of Boston, and Prof. Martin of Baltimore. It is to be published at intervals of two or three months, according to supply of material, and judging from the present issue, will be devoted exclusively to Physiology. We heartily welcome this new Journal.

OBITUARY.

JOHN EUGENE TYLER.

Another useful and honorable life, spent in ministering to the suffering, has ended. Dr. Tyler died at his residence, in Boston, on the 9th of March, 1878. He was born in the same city on the 9th of December, 1819. His father, John E. Tyler, who graduated at Harvard, in 1786, was a physician and practiced his profession at Westborough for some years, but afterwards engaged in business in Boston. We quote from a letter written by a friend of Dr. Tyler, President Brown, of Hamilton College. "His case was very like that of Dr. Peaslee, at whose funeral I last saw him. The disease was pneumonia, and he was ill but a few days. Some of his friends had for several years observed certain signs of failing powers of which he was himself conscious, and about which he was accustomed to talk with his intimate friends, as cheerfully and freely as on any other subject. Dr. Tyler was graduated at Dartmouth College, in 1842. I remember him as an excellent scholar, faithful in all duties, of considerable maturity of mind, with dignity and strength of character rather unusual, and a certain robust manliness which foreshadowed what he would be. After graduating, he taught for a while a private school in Newport, R. I., and in part studied his profession there, with Dr. Dunn. He took his medical degree at Dartmouth, in 1846 (he had taken that degree at the University of Pennsylvania the same year) and entered upon the practice of medicine in Salmon Falls, N. H. He represented the town in the State Legislature several years. In 1852 he was chosen

Superintendent of the New Hampshire Asylum for the Insane, to succeed Dr. McFarland. His administration of this important trust was such as to advance very decidedly the interests of the Institution and to place it on a firm foundation of honor and usefulness. After a service of five years he resigned his office and was almost immediately chosen Superintendent of the McLean Asylum, at Somerville, near Boston, succeeding in that important post Dr. Luther V. Bell. After many years of service in Somerville he resigned, and has since lived in Boston, his time being fully occupied as a consulting physician in cases of mental disease. He has also for many years been Professor of Mental Diseases in the Harvard Medical School."

SUMMARY.

—On the seventh instant (April) the Insane Department of the Steuben County House, at Bath, N. Y., was burned, and fifteen of its inmates perished. One of these, an epileptic, was allowed to have a light in his room and to smoke there, and it is believed that, in the unconsciousness succeeding a fit, he set fire to the bed-clothes. This is a sad proof of the folly of reposing confidence in those who are liable at any time to become unconscious, and yet, at the same time, have power to carry out the suggestions of an unhealthy and excited brain. It is not safe at any time to trust an epileptic.

—In the last number of the *Detroit Lancet* is an editorial upon the Wayne County Asylum (Michigan), from which it appears that a committee of the Board of Supervisors has found in that Institution "a condition of things, especially as regards the management of the

Insane Asylum, which is simply disgraceful." To the enmity and jealousy existing between the attending physician and the keeper of the Asylum, is attributed much of the maltreatment and neglect of the patients entrusted to their joint care. "From this cause at least two deaths have occurred." Here we have another demonstration of the evil resulting from a division of ultimate responsibility in the management of such institutions. The editor of the *Lancet* very wisely declares that "the care of an insane asylum should be in the hands of a specialist, whose authority should be paramount in the institution."

—A State Asylum for the Insane was opened in May, 1877, at Chattahoochee, Florida. Dr. S. T. Overstreet, its Superintendent, gives us this information: The building was erected in 1834, as a Government arsenal, at great cost and from the best material. After the Rebellion it was sold to the State authorities to be used as a State Prison. In March, 1877, the Legislature abolished the State Prison, and the building was then converted into a Lunatic Asylum. The Institution is located about a mile from the Apalacheecola river, near its head and within a few hundred yards of the Georgia line. The country is undulating and beautiful, one of the most elevated portions of the State, well watered with springs—altogether a delightful region, but its proximity to the river and swamps subjects its inhabitants to malarial fevers. The buildings are very convenient and comfortable, and will accommodate 150 patients. Up to the time of writing but 42 cases had been received; but, although these were chiefly cases of long standing, seven had been discharged restored, and in nearly all the rest there had been a general improvement.

—Dr. A. P. Reed has been appointed Medical Superintendent of the Nova Scotia Hospital for the Insane, *vice* James R. DeWolf.

—Dr. Calvin S. May, who has been First Assistant at the Connecticut Hospital for the Insane, Middletown, has been appointed Superintendent of the new Asylum, at Danvers, Mass.

—Dr. James Olmstead, has been promoted to the position of First Assistant and Dr. W. E. Fisher, to that of Second Assistant, in the Hospital at Middletown, Conn.

—Dr. W. B. Hallock, formerly Assistant in the Connecticut Hospital for the Insane, has opened an Institution for Insane of the Private Class, at Cromwell, Conn. It is called "Cromwell Hall."

—Dr. Henry M. Hurd, for a long time an Assistant at Kalamazoo, has been appointed Superintendent of the New State Asylum at Pontiac, Mich.

—Dr. Chas. E. Stanley, of Hartford, has been appointed Third Assistant Physician in the Connecticut Asylum for the Insane.

—Dr. John Arnold, who had been for three years Assistant Physician in the New York City Lunatic Asylum, Blackwell's Island, resigned last December to accept a similar position in the Kings County Lunatic Asylum, Flatbush, L. I.

—The Thirty-Second Annual Meeting of the Association of Medical Superintendents of American Institutions for the Insane, will be held at Willard's Hotel, in the City of Washington, D. C., commencing at 10 A. M., Tuesday, May 14, 1878.

—A number of Canadian and Foreign Asylum Reports have been received, which will be noticed in our next issue.



